

# **EPA Registration File 34704-1033 Vol. 1**



**ACCEPTED** 2/10  
 MAR 2 2006  
 Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act,  
 as amended, for the pesticide  
 registered under  
 EPA Reg. No. 34704-909

# RADIATE™

Reduces transplant shock and promotes plant growth

ACTIVE INGREDIENTS:		By wt
3-Indolebutyric acid (IBA).....	0.85%	
Cytokinin, as Kinetin.....	0.15%	
OTHER INGREDIENTS:.....	99.00%	
TOTAL .....	100.00%	

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

FIRST AID	
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOTLINE	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. <b>FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-301-7976.</b>	

### PRECAUTIONARY STATEMENTS

#### HAZARD TO HUMANS AND DOMESTIC ANIMALS

**CAUTION** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

EPA Reg. No. 34704-

EPA Est. No.

Net Contents: 2.5 Gal.

  
**Loveland**  
 PRODUCTS INC.  
 P.O. Box 1286  
 Greeley, CO 80632  
 1-800-356-7202

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear: long sleeved shirt and long pants, chemical resistant gloves Category A, such as butyl rubber  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils or nitrile rubber  $\geq 14$  mils and shoes plus socks. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### DIRECTIONS FOR USE:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during applications. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical resistant gloves Category A, such as butyl rubber  $\geq 14$  mils, or natural rubber  $\geq 14$  mils, or neoprene rubber  $\geq 14$  mils or nitrile rubber  $\geq 14$  mils
- Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter without appropriate protective clothing until sprays have dried.

### GENERAL INFORMATION

**RADIATE™** contains two (2) different plant growth regulators (PGRs) that synergistically stimulate early and improved root development. In addition, **RADIATE™** contains a mixture of vitamins that aid in successful transplanting and plant growth.

### USE DIRECTIONS FOR CHEMIGATION

**RADIATE™** can be applied through fixed or standing irrigation systems although foliar applications are preferred. Apply this product only through the following types of irrigation systems:

1. Sprinkler including big gun, solid set or hand move irrigation systems.
2. Calibrated overhead watering booms
3. Drip (or micro sprinkler) irrigation systems. Before applying this product through any type of irrigation system, perform a small-scale trial to determine if product performance and phytotoxicity results are acceptable.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems), used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.

### CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir

tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Agitate the pesticide supply tank throughout the application of **RADIATE™**. Except for turfgrass, apply **RADIATE™** at the rate of 20 fl. oz. per acre at the end of the irrigation period in a sufficient amount of water to allow proper coverage of plant or crop. Fill the supply tank one-half full with water, add the appropriate amount of **RADIATE™** to the tank and finish filling the tank with water.

#### **DRIP/TRICKLE OR SPRINKLER CHEMIGATION**

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Agitate the pesticide supply tank throughout the application of **RADIATE™**. Except for turfgrass, apply **RADIATE™** at the rate of 20 fl. oz. per acre at the end of the irrigation period in a sufficient amount of water to allow proper coverage of plant or crop.

Fill the supply tank one-half full with water, add the appropriate amount of **RADIATE™** to the tank and finish filling the tank with water.

6/10

### MINIMUM SPRAY VOLUME (GALLONS) PER ACRE WHEN APPLYING RADIATE™:

Crop	Ground		Air
	Dilute	Concentrate	
Vegetables, Field Crops	15	---	5
Small fruits, Vines, Miscellaneous	150	50	15
Tree crops	400	50	20
Citrus	800	100	20

Depending upon the equipment used, and the specific crop, the spray volume applied per acre will differ.

**Special considerations:** RADIATE™ compatibility with other agricultural products has not been fully investigated. Compatibility of RADIATE™ with other products requires testing for crop safety and performance prior to large-scale use. Products mixed with RADIATE™ must be acidic (pH less than 7). Do not mix RADIATE™ with any product(s) having a pH greater than 7. Repeat application may be necessary if it rains within 2 hours after application.

Depending upon the equipment used and specific crop, spray volume applied per acre will differ. Apply sufficient water volume to ensure thorough coverage.

### APPLICATION INSTRUCTIONS TO REDUCE TRANSPLANT SHOCK AND PROMOTE NEW PLANT GROWTH

Crop	Amount of RADIATE™ (fl. oz.)	Application Timing	Remarks
Brassica Vegetables such as: Broccoli, Cauliflower, Cabbage & Mustard Greens	Drench application in transplant water at 1.3 fl. oz. per 10 gallons water.	1st: At time of transplant. 2nd: 10-14 days after first application.	Foliar application: Apply to achieve full coverage; use a non-ionic surfactant for hard to wet crops such as cabbage.
	Foliar application: 2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days after first application.	
Leafy Vegetables such as: Celery, Head lettuce, Leaf lettuce and Spinach	2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days after first application.	Thorough spray coverage is necessary.
Cucurbit Vegetables such as: Cucumber, Muskmelon, Cantaloupe, Summer squash, Watermelon and Honeydew	2 fl. oz. per acre*	1st: If seeded, apply at 2-4 true leaf stage. 2nd: 10-14 days after first application.	Enhances root growth.
		1st: If transplanted, apply when new growth starts. 2nd: 10-14 days after first application.	
Fruiting Vegetables such as: Tomato, Pepper and Eggplant	2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days later.	To maximize yield.

Corn (Sweet, Field and Popcorn)	2 fl. oz. per acre*	Two applications: 1st: At 2-3 leaf stage. 2nd: 7-14 days after first application.	Can be tank mixed with Glyphosate products registered for use on Roundup Ready® corn.
Tuber Vegetables such as: Potato, Sweet potato, Yam	2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days after first application.	Foliar application: apply thoroughly until dripping.
Root Vegetables such as: Carrot, Radish, Turnip, Ginseng, Horseradish, Parsley (turnip-rooted) and Sugar beet	2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days after first application.	Foliar application: thorough spray coverage is necessary.
Citrus Fruits such as: Sweet orange, Lemon and Grapefruit	13 fl. oz. in 100 gallons water	Apply when fruit are 5 mm in size. Make additional applications if needed.	Thoroughly apply spray.
Pome/Stone Fruits such as: Apple, Apricot, Cherry, Plum, Plumcot and Peach	13 fl. oz. in 100 gallons water	Apply when fruit are 5 mm in size. Make additional applications if needed.	
Grape	4-6 fl. oz. in 100 gallons water	1st: Apply when grapes are 2-3 mm in size. 2nd: 10-14 days after first application. 3rd: 45 days prior to harvest. 4th: 30 days prior to harvest.	Increases berry size.
Strawberry	1.3 fl. oz. in 10 gallons water	1st: Spray immediately after transplant. 2nd: 10-14 days after first application.	Thoroughly apply spray.
Cotton	2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days after first application. Can be tank mixed with Glyphosate products registered for use on Roundup Ready® cotton.	Thorough spray coverage is necessary. Can be tank mixed with Glyphosate products registered for use on Roundup Ready® cotton.
Sorghum	2 fl. oz. per acre*	1st: At 2-leaf stage. 2nd: 10-14 days after first application. 3rd: 10-14 days following second application.	Thorough spray coverage is necessary.
Peanut	2 fl. oz. per acre*	1st: At 2-4 true leaf stage. 2nd: 10-14 days after first application.	Thorough spray coverage is necessary.
Legume Vegetables (Succulent or dry) such as: Soybean, Peas, Chinese long beans	2 fl. oz. per acre*	1st: At 2-4 trifoliate leaf stage. 2nd: 10-14 days after first application.	Can be tank mixed with Glyphosate products registered for use on Roundup Ready® soybeans.
Rice	2 fl. oz. per acre*	1st: At 4-5 leaf stage.	Thorough spray coverage is necessary.
Wheat	2 fl. oz. per acre*	1st: At 2-4 leaf stage.	Thorough spray coverage is necessary.
Canola (Oil)	2 fl. oz. per acre*	1st: At 2-4 leaf stage.	Can be tank mixed with Glyphosate products registered for use on Roundup Ready® canola.

\*If application spray volume is greater than 15 gallons per acre, use the dilution rate of 13 fl. oz. per 100 gallons water.

## TURFGRASS

- For Sod Grass:** Apply RADIATE™ by ground using 20-40 gallons of water per acre. Use 2.5 fl. oz. to 6.5 fl. oz. product in 20 gal. to 40 gals. of water, respectively, at a 1:1000 dilution rate.
- For Turfgrass:** Apply RADIATE™ by ground according to the table below using 1-10 gallons of water per 1000 sq. ft. Use RADIATE™ for turf growth suppression at the dilution rate of 1: 300 (4.2 fl. oz. product per 10 gals. water)

Turf	Amount (RADIATE™/gals water/1000 sq ft)	How and when to apply
Warm Climate grasses such as: St Augustine, Bermuda, Bermuda hybrids, Centipede & similar warm season grasses	0.13 fl.oz. per gallon of water. Use 1-5 gals of water/1000 sq. ft.	Make applications at 2-week intervals during the growing season.
Dichondra	0.13 fl.oz. per gallon of water. Use 5-10 gals of water/1000 sq. ft.	Make applications at 2-week intervals during the growing season.
Cool Climate grasses such as: Bluegrass, Rye, Fescue, and similar cool season grasses	0.13 fl.oz. per gallon of water. Use 1-5 gals of water/1000 sq. ft.	Make applications at 2-week intervals during the growing season.

## ORNAMENTALS

### Greenhouse and nursery grown ornamentals

Differences in responsiveness may vary from one cultivar to another or from one set of growing conditions to another. Unless previous experience dictates otherwise, prior to widespread use, test a small number of plants from each cultivar to verify desired efficacy.

**Application Rates and Timing for Foliage Plants, Bedding and Flowering Plants, Woody Ornamentals and Garden Grown Tree Fruits:** Dilute 0.85 fl. oz. of RADIATE™ in 10 gallons of water (1:1500 dilution rate) for plants less than 2 years old. Dilute 1.3 fl. oz. RADIATE™ in 10 gallons of water (1:1000 dilution rate) for mature plants. Repeat applications at 10-14 day intervals when required. Apply the last spray 1-2 weeks prior to sale. Uniform and thorough spray coverage is necessary for best results.

#### **Foliage Plants:**

Aglaonema, Ajuja, Anthurium, Aphelandra, Caladium, Cissus, Dieffenbachia, Dracaena, Ficus, Fittonia, Gynura, Hoya, Maranta, Palms, Peperomia, Philodendron, Pilea, Pothos, Schefflera, Schlumbergera, Spathiphyllum, Syngonium, Tradescantia, Similar foliage plants.

**Bedding and Flowering Plants:** Abutilon, Aglais, Alyssum, Calceolaria, Canna, Carnation, Champaca, Chrysanthemum, Cineraria, Columbine, Coral Bells, Cyclamen, Dahlia, Delphinium, Dianthus, Foxglove, Fuchsia, Gardenia, Gazania, Geranium, Gladiolus, Gloxinia, Impatiens, Iris, Jasminum, Lily, Lupine, Marigold, Michelia, Monarda, Osmachus, Petunia, Poinsettia, Portulaca, Roses, Salvia, Scabiosa, Sedum, Sempervivum, Tulips, Vinca, Zinnia, Similar plants.

**Woody Ornamentals**

Arborvitae, Aucuba, Azalea, Boxwood, Carissa, Chinese magnolia, English Ivy, Holly, Juniper, Maple, Pine, Podocarpus, Rhododendron, Viburnum, Similar plants

**Garden Grown Tree Fruits**

Apple, Asian pear, Fig, Guava, Kumquat, Lemon, Apricot, Cherry, Grape, Jujubee, Litchi, Longara, Mango, Orange, Peach, Persimmon, Plum, Prunus, Starfruit, Similar plants

**CUTTINGS**

**Dilution rate:**

**For softwood cuttings use a 1:20 dilution rate** (0.5 fl. oz. product in 10 fl. oz. of water); **For medium wood cuttings use a 1:10 dilution rate** (One fl. oz. product in 10 fl. oz. of water); **For hard wood cuttings use a 1:5 dilution rate** (Two fl. oz. product in 10 fl. oz. water).

**RADIATE™:** Use on all nursery stock cuttings including **Woody ornamentals, Deciduous hardwoods, Evergreens, Ground Covers, and Perennials** such as: African violet, Arborvitae, Azalea, Aster, Barberry, Begonia, Boxwood, Camellia, Crape-myrtle, Clematis, Chrysanthemum, Cypress, Dahlia, Delphinium, Dogwood, Eponymous, Forsythia, Fuchsia, Geranium, Heather, Hibiscus, Holly, Honeysuckle, Ivy, Japanese quince, Jasmine, Juniper, Lilac, Magnolia, Minor, Myrtle, Pachysandra, Photinia, Pivet, Pyracantha (Firethorn), Rhododendron, Rose, Spirea, Yew, Viburnum, Vinca, Wriggle and many others.

Obtain cuttings from vigorous, healthy plants and keep cuttings moist and cool such as in an ice chest. With a sharp knife, trim the cutting (2-8 inches long) with a diagonal cut just below a node or leaf. Dip the basal end of cutting, individually or in bunches, into the **RADIATE™** solution for **3-5 seconds**.

Following dipping, place cuttings into planting medium. Depending on the species, rooting will take place in several weeks or months under a moist greenhouse environment. Transplanting may be performed once the cuttings have rooted.

**TO REDUCE TRANSPLANT SHOCK AND PROMOTE NEW ROOT GROWTH- For Shrubs, Flowers, Groundcovers & Houseplants**

**Rose, Arborvitae, Gardenias, flowering trees and other ornamentals in bare root transplant or from containers:** Use 2 tablespoons of **RADIATE™** per 10 gallons of water. Apply solution to root area in transplanting hole and then cover roots with soil. After planting, repeat applications biweekly as a drench to thoroughly wet the root area using a solution consisting of one tablespoon of **RADIATE™** per 10 gallons of water.

**Annual and perennial flowers (bedding plants):** Use one tablespoon of **RADIATE™** per 10 gallons of water and apply to thoroughly saturate roots at time of planting. Repeat at weekly intervals until plants are well established.

10/10

**Groundcovers such as, Ivy, Iceplants, Geranium, Cotoneaster, Barberry, & Ajuga:** Use 1 tablespoon of **RADIATE™** per 10 gallons of water and apply thoroughly to saturate the root area at time of planting. Repeat at weekly intervals until plants are well established.

**Houseplants (repotting and planting):** Use 1 tablespoon of **RADIATE™** per 10 gallons of water and water thoroughly at weekly intervals to saturate the root zone until plants are well established.

**Established plants:** To continue new root growth, use 1 tablespoon of **RADIATE™** per 10 gallons of water and water plants with solution once a month.

#### **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

##### **PESTICIDE STORAGE:**

**RADIATE™** should be stored in its original container in a cool, dry locked place out of the reach of children and out of direct sunlight.

##### **PESTICIDE DISPOSAL:**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

##### **CONTAINER DISPOSAL:**

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **WARRANTY DISCLAIMER AND NOTICE**

THE DIRECTIONS FOR USE OF THIS PRODUCT ARE BELIEVED TO BE ADEQUATE AND SHOULD BE FOLLOWED CAREFULLY. IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS INHERENTLY ASSOCIATED WITH THE USE OF THIS PRODUCT. CROP INJURY, INEFFECTIVENESS, OR OTHER UN INTENDED CONSEQUENCES MAY RESULT DUE TO SUCH FACTORS AS WEATHER CONDITIONS, PRESENCE OR ABSENCE OF OTHER MATERIALS, OR THE MANNER OF USE OR APPLICATION, ALL OF WHICH ARE BEYOND THE CONTROL OF LOVELAND PRODUCTS, INC., THE MANUFACTURER OR SELLER. THE PRODUCTS SOLD TO YOU ARE FURNISHED "AS IS" BY LOVELAND PRODUCTS, INC., THE MANUFACTURER OR SELLER, AND ARE SUBJECT ONLY TO THE MANUFACTURER'S WARRANTIES, IF ANY, WHICH APPEAR ON THE LABELS TO THE PRODUCTS SOLD TO YOU. EXCEPT AS EXPRESSLY PROVIDED HEREIN, LOVELAND PRODUCTS, INC., THE MANUFACTURER OR SELLER MAKES NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD OR USE OF THE PRODUCT, INCLUDING, BUT NOT LIMITED TO, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. EXCEPT AS EXPRESSLY STATED HEREIN, LOVELAND PRODUCTS, INC., THE MANUFACTURER OR SELLER MAKES NO WARRANTY OF RESULTS TO BE OBTAINED BY USE OF THE PRODUCT. BUYER'S OR USER'S EXCLUSIVE REMEDY, AND LOVELAND PRODUCTS, INC.'S, THE MANUFACTURER'S OR SELLER'S TOTAL LIABILITY, SHALL BE LIMITED TO DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT. NO AGENT OR EMPLOYEE OF LOVELAND PRODUCTS, INC. OR SELLER IS AUTHORIZED TO AMEND THE TERMS OF THIS WARRANTY DISCLAIMER OR THE PRODUCT'S LABEL OR TO MAKE A REPRESENTATION OR RECOMMENDATION DIFFERENT FROM OR INCONSISTENT WITH THE LABEL OF THIS PRODUCT. IN NO EVENT SHALL LOVELAND PRODUCTS, INC., THE MANUFACTURER OR SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES AND THE BUYER AND USER WAIVE ANY RIGHT THEY MAY HAVE TO SUCH DAMAGES.

**RADIATE™** is a trademark of Loveland Products, Inc.

**Roundup Ready™** is a registered trademark of the Monsanto Company

  
**Loveland**  
PRODUCTS INC.  
P.O. Box 1286  
Greeley, CO 80632

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



## U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Biopesticides and Pollution Prevention  
Division (7511C)

1200 Pennsylvania Avenue NW  
Washington, DC 20460

EPA Reg.  
Number:

34704-909

Date of Issuance:

3/2/06

Term of Issuance:

Unconditional

Name of Pesticide Product:

RADIATE™

## NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration  
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Loveland Products, Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above-named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA Sec. 3(c)(5) provided you:

1. Submit and /or cite all data required for registration/reregistration of your product under FIFRA Sec.3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA Sec.4.
2. Revise the EPA Registration Number to read, "EPA Reg. No. 34704-909.
3. When the supplier [redacted] of the pesticide formulation that is the registered source of this repack registration, changes the formulation of its product [redacted] Loveland Products, Inc., will distribute only the amended formulation within 90 days of EPA's approval of the formulation change.
4. Submit three (3) copies of the revised final printed label for the record.

Signature of Approving Official:

Janet L. Andersen, Director  
Biopesticides and Pollution Prevention Division

Date:

3/2/06

EPA Form 8570-6

## CONCURRENCES

SYMBOL	7511C	7511C					
SURNAME	Petersen	Ruth					
DATE	3/1/06	3/2/06					





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND  
TOXIC SUBSTANCES

Edith Emory  
7251 W 4<sup>th</sup> Street  
P.O. Box 1286  
Greeley, CO 80632-1286

2-22-10

Subject: EPA Reg. 34704-1033 / Swagger Herbicide Label Amendment

Dear Ms. Emory:

The labeling referred to above is acceptable provided you make the following changes to the label:

1. You must remove "glyphosate tolerant crops" everywhere from the label and only use the phrase "roundup ready crops".
2. On page 22, change "Loveland Products, Inc. recommends us of this product" to "This product may only be used for".
3. On page 24 and 26, change "are not recommended for over the top" to "are not to be used for over the top". On page 24, change "should not exceed 64" to "must not exceed" and "should be at least 7 days" to "must be at least 7 days". On page 26, change "should not exceed 6 quarts" to "must not exceed 6 quarts".
4. On page 31 and 33, add "total of all" in front of "preplant, preemergence applications".
5. On page 35, change "general information" to "product information".
6. On page 37, add "total of all" in front of "preplant/preemergence".
7. On page 39, change "general information" to "product information". Change "should not exceed" to "must not exceed".
8. On page 40, delete "general" from "general precautions, restrictions".

You must submit a copy of the final printed label. A stamped copy of the label is enclosed for your records. This label supersedes all previously accepted labels. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. If you have any questions please call Erik Kraft at 703-308-9358 or email at [Kraft.Erik@epa.gov](mailto:Kraft.Erik@epa.gov).

Sincerely,

Jim Tompkins  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)



# SWAGGER

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

2-22-18

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

34704-1033

**AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.**

#### ACTIVE INGREDIENT

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	41.0000%
**3-Indolebutyric acid (IBA)	0.0500%
***Cytokinin, as Kinetin	0.0088%
OTHER INGREDIENTS:	58.9412%
<b>TOTAL</b>	<b>100.0000%</b>

\*Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate.

\*\*Contains 0.612 grams per liter or 0.0050 pounds per U.S. gallon of the active ingredient, 3-Indolebutyric acid (IBA).

\*\*\*Contains 0.108 grams per liter or 0.0009 pounds per U.S. gallon of the active ingredient, Cytokinin, as Kinetin.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

#### FIRST AID

<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:**  
1-866-944-8565.

EPA REG. NO. 34704-

EPA EST. NO. 34704-MS-001

NET CONTENTS 1 GAL. (3.78 L)

IHT

060809 REVISIONS 2/5/2010

Herbicide claims  
for 2 growth regulators  
X Should not have spec.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing.

**DOMESTIC ANIMALS:** This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary, gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist more than 24 hours.

**PERSONAL PROTECTIVE EQUIPMENT: (PPE)**

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash contaminated clothing before reuse.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinseate.

**PHYSICAL OR CHEMICAL HAZARDS**

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

**DO NOT MIX, STORE, OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Read the entire label before using this product. Use only according to label instructions. Read the "CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are unacceptable, return at once unopened.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow working entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Chemical resistant gloves made of any waterproof material,
- Shoes plus socks.

### PRODUCT INFORMATION

**Product Description:** This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and through mixing with water or other carriers according to label instructions. Additional surfactants, additives containing surfactant, buffering agents, pH adjusting agents, or defoaming products may be utilized if desired. Adjuvants such as **Weather Gard Complete**, **LI 700®**, or **Liberate®** used at 0.25% to 0.50% v/v. The use of Unfoamer is for defoaming.

See the MIXING section of this label for instructions.

The use of **Compadre®** at .125% v/v is for drift control and defoaming.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above ground growth and deterioration of underground plant parts.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial, woody brush and trees rate tables for information on controlling specific weeds.

Always use the higher rate of this product per acre within the specified range when weed growth is heavy or dense weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

**Cultural Considerations:** Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

#### INFORMATION ON WEED RESISTANCE

Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Although rare in occurrence, any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices.

Weed resistance management techniques for Group 9 herbicides include:

- Ensure optimum weed control by making applications at the right time (correct weed size) and utilizing the label rate for the most difficult to control weed in your field.
- Base decisions on local needs and use the tool(s) necessary to obtain optimum weed control and minimize weeds escapes.
- Avoid tank-mixtures that reduce this product's efficacy (through antagonism) or which encourage rates of this product below the labeled rates.
- Scout treated weed populations for escapes 2-4 weeks after application.
- Report any incidence of repeated non-performance of this product on a particular weed to the local retailer, county extension agent, or Loveland Products, Inc. representative.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

**Spray Coverage:** For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

**Mode of Action:** The active ingredient in this product inhibits an enzyme found only in plants that is essential to formation of specific amino acids.

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

**Tank Mixing:** This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

This product may be tank mixed with the products listed in this label providing the product tank-mixed is registered for use on this site.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified in this label. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

**Annual Maximum Use Rate:** Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 2 gallons (6 lb a.i. glyphosate/A) of this product per acre per year.

#### **ATTENTION**

**AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.**

**AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.**

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation because minute quantities of this product can cause severe damage or destruction to the crop, plants, or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. **AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.**

**NOTE:** Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

#### **MIXING**

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

**NOTE:** REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

#### **MIXING WITH WATER**

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the specified amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

#### **TANK MIXTURE PROCEDURE**

This product may be tank mixed with the products listed in this label, providing the product tank-mixed is registered for use on this site.

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20 to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.

3. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
7. When nonionic surfactant is utilized, add this to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

**Tank Mix Compatibility Test:** Test Compatibility of the intended tank mixture before adding this product to the spray or mix tank. Add proportional amounts of each tank mix ingredient to a pint or quart jar, cap, shake, and let set 15 minutes. Formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used.

Refer to the "Tank Mixing" section of "PRODUCT INFORMATION" for additional precautions.

#### MIXING FOR HAND-HELD SPRAYERS

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

##### Spray Solution

Desired Volume	Amount of SWAGGER					
	½%	1	1½%	2%	5%	10%
1 Gal	2/3 oz	1 1/3 oz	2 oz	2 2/3 oz	6 1/2 oz	13 oz
25 Gal	1 pt	1 qt	1 1/2 qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1 1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the specified amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

##### **Ammonium Sulfate**

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

**NOTE:** When using ammonium sulfate, apply this product at rates specified in this label. Lower rates will result in reduced performance.

#### **Colorants or Dyes**

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's label.

#### **Drift Control Additives**

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the cautionary statements and other information appearing on the additive label. The use of **Compadre** at .125% v/v is for drift control and defoaming.

### **APPLICATION EQUIPMENT AND TECHNIQUES**

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

**Aerial – Fixed Wing and Helicopter**

**Ground Broadcast Spray** – Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

**Hand-Held and High-Volume Spray Equipment** – Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

\*This product is not registered in California or Arizona for use in mistblowers.

**Selective Equipment** – Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

**Injection Systems** – Aerial or ground injection sprayers.

**Controlled Droplet Applicator (CDA)** – Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

### **AERIAL SPRAY DRIFT MANAGEMENT**

#### **Spray Drift Management**

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications nor to public health uses.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and follow the information covered in the Aerial Drift Reduction Advisory.

### **Aerial Drift Reduction Advisory**

(This section is advisory in nature and does not supersede the mandatory label requirements)

#### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

#### **Controlling Droplet Size**

- Volume – Use high flow rate nozzles to apply the highest practical spray volume.
- Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designated for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **Boom Length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **Application Height**

Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

#### **Wind**

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

### **Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### **Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **Sensitive Areas**

The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### **Aerial Equipment**

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL. This product plus Rifle® or 2,4-D tank mixtures may not be applied by air in California.

Use the specified rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 1 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems. Fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for volumes and application rates.

Avoid direct application to any body of water.

**AVOID DRIFT – DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Ensure uniform application – To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

**Arkansas Only:**

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION. APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the specified rate of this product in 3 to 15 gallons of water per acre. Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough (droplets that are coarse and in the 300 to 500 (VMD) micron range) to avoid drift potential.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety. The distance of the outermost nozzles on the boom must not exceed 75% of the length of the wingspan or rotor. In many cases, reducing the distance to 65% of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.

Do not apply this product when wind speeds are in excess of 10 miles per hour.

Do not apply this product when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 mph.

Use the following guidelines when applications are made near crops or other desirable vegetation:

1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

**Arkansas, Louisiana, Mississippi, Missouri, and Tennessee Only:**

This product controls annual and perennial weeds listed on this label prior to planting or emergence of corn, cotton, rice, sorghum and soybeans, and following the harvest of any crop in the fall via aerial applications in these locations.

Aerial applications of this product may be made in fallow systems and conventional, reduced and zero tillage systems. For applications via aerial equipment, use the specified rates of this product in 3 to 10 gallons of water per acre. Do not exceed a rate of 3 quarts per acre.

The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser velocities, will allow spray drift to occur.

**Ground Broadcast Equipment**

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased with-

in the specified range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

#### **Hand-Held and High-Volume Equipment**

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

For control of weeds listed in the annual weeds rate tables, apply a 0.5 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1 percent solution.

For best results, use a 2 percent solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 5 percent solution for annual and perennial weeds and a 5 to 10 percent solution for woody brush and trees.

#### **Selective Equipment**

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label and only when specifically directed in cropping systems.

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

#### **AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION**

Contact of the herbicide with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

#### **Shielded and hooded applicators**

Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. **EXTREME CARE MUST BE EXERCISE TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

### **Wiper applicators and sponge bars**

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1 - day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

**For Rope or Sponge Wick Applicators** – Mix 1 gallon of this product in 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed in this section.

**For Porous-Plastic Applicators** – Solutions ranging from 33 to 100 percent of this product in water may be used in porous-plastic wiper applicators.

When applied as directed, this product **CONTROLS** the following weeds:

When applied as directed, this product **SUPPRESSES** the following weeds:

Corn, volunteer Panicum, Texas	Rye,common Shattercane	Sicklepod Spanishneedles	Starbur, bristly
Beggarweed, Florida Bermudagrass Dogbane, hemp Dogfennel	Guineagrass Milkweed Nightshade, silverleaf Ragweed, common	Pigweed, redroot Ragweed, giant Smutgrass Sunflower	Thistle, musk Vaseygrass Velvetleaf

### **Injection Systems**

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

### **Controlled Droplet Application (CDA) Equipment**

The rate of this product applied per acre by vehicle-mounted CDA Equipment must not be less than the amount specified in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of perennial weeds, apply a 20 to 40 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 4 quarts per acre).

Controlled droplet application (CDA) equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

### **CROPS (Alphabetical)**

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category.

Unless otherwise specified, applications may be made to control any weeds listed in the Annual, Perennial and Woody Brush tables shown at the end of this label. Also refer to the "SELECTIVE EQUIPMENT" section.

For any crop not listed in this "CROPS" section, applications must be made at least 30 days prior to planting.

For broadcast postemergent treatments, do not harvest for 8 weeks following application, unless otherwise specified.

When applying this product prior to transplanting crops into plastic mulch, residues may be removed from the plastic by 0.5 inches of water via sprinkler irrigation or natural rainfall.

The maximum use rate as stated on this product's labeling is determined as a total of this product combined with the use of all other sources of glyphosate or sulfosate, whether applied as mixtures or separately. Calculate application rates and ensure that the **total use** of this and other glyphosate and/or sulfosate containing products do not exceed stated maximum use rate.

### **ALFALFA AND CLOVER**

**Labeled Crops:** Alfalfa, clover.

**Types of Applications:** Dormant, preplant, preemergence, at-planting, spot treatment, wiper applicators, renovation, preharvest

#### **Dormant (Alfalfa only)**

**Use Instructions:** This product will control or suppress many weeds including quackgrass, downy brome and cheatgrass in dormant alfalfa. Apply 8 to 12 ounces per acre of this product. Apply in the spring to alfalfa that is dormant. Applications should be made after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield.

**Precautions, Restrictions:** Do not use ammonium sulfate when spraying dormant alfalfa with SWAGGER. Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated. Do not make more than one application per year. Allow 36 hours after application before grazing livestock or harvesting. Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off. Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.

#### **Preplant, Preemergence, and At-planting**

**Use Instructions:** This product may be applied before, during or after planting alfalfa and clover. Applications must be made prior to emergence of the crop.

**Precautions, Restrictions:** Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

**Preharvest (Alfalfa only)**

**Use Instructions:** This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Use up to 1 quart of this product per acre. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

**Precautions, Restrictions:** Do not apply more than 1 quart of this product per acre as a preharvest treatment. Do not use for alfalfa grown for seed, as a reduction in germination or vigor may occur.

**Spot treatment or Wiper applications**

**Use Instructions:** This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

**Precautions, Restrictions:** Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

**Renovation**

**Use Instructions:** This product may be applied as a broadcast spray to existing stands of alfalfa, clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.

**Precautions, Restrictions:** Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

**CEREAL CROPS**

**Labeled Crops:** Rice, Wheat (All)

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment (except rice), post-harvest, preharvest (wheat only), wiper applicators (wheat only)

Do not treat rice fields or levees when the field contains floodwater.

**Preplant, Preemergence and At-planting**

**Use Instructions:** This product may be applied before, during, or after planting of cereal crops. Applications must be made prior to emergence of the crop.

**Spot treatment (wheat only)**

**Use Instructions:** This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

### **Postharvest**

**Use Instructions:** This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures of 2,4-D or dicamba may be used.

**Precautions, Restrictions:** For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Do not harvest or feed treated vegetation for 8 weeks following application.

### **Preharvest (wheat only)**

**Use Instructions:** This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest.

The product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

**Precautions, Restrictions:** Do not apply more than 1 quart of this product per acre. Do not apply to wheat grown for seed, as a reduction in germination or vigor may occur.

### **Wiper applications (wheat only)**

**Use Instructions:** Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.

**Precautions, Restrictions:** Allow at least 35 days between application and harvest. Do not use roller applicators.

### **For nonselective control of listed annual weeds in small grain cropping systems (South Dakota only)**

**Use Instructions:** For ground applications, use 3 to 5 gallons of water per acre. For aerial applications, use 2 to 3 gallons of water per acre.

**Precautions, Restrictions:** The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. Adjust boom height on ground equipment to prevent streaked, overlapped or uneven applications. Avoid spraying when weeds are subject to moisture stress, when dust is on foliage, or when straw canopy covers the weeds.

### **Red Rice Control Prior To Planting Rice (Texas only)**

**Use Instructions:** Apply 1.5 quarts of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may only be partially controlled.

**Precautions, Restrictions:** Avoid spraying during low humidity conditions, as reduced control may result. DO NOT TREAT RICE FIELDS OR LEVEES WHEN THE FIELDS CONTAIN FLOOD WATER. DO NOT RE-FLOOD TREATED FIELDS FOR 8 DAYS FOLLOWING APPLICATION.

## CORN

**Types of Corn:** Field corn, seed corn, sweet corn and popcorn

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment, hooded sprayers, preharvest, post-harvest

### **Preplant, Preemergence and At-planting**

**Use Instructions:** This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop.

The following tank mixtures may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

ATRAZINE  
BICEP MAGNUM®  
BICEP II MAGNUM®  
BULLET®  
CADENCE®  
CYANAZINE  
DUAL® II MAGNUM®  
GUARDSMAN MAX®

HARNESS®  
HARNESS® XTRA  
HARNESS® XTRA 5.6L  
INTRRO®/ALACHLOR  
LARIAT®  
LINEX®  
LOROX®  
MICRO-TECH®

OUTLOOK®  
RIFLE®  
RIFLE PLUS®  
SIMAZINE  
STEALTH®  
TOPNOTCH®

Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre. For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. See the map in the Annual Weeds section of this label for areas included.

For improved burndown, this product may be tank mixed with 2,4-D or dicamba.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

**Annual weeds** – For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.

**Precautions, Restrictions:** Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

The tank mixes listed in this section are not registered in California.

### **Spot treatment**

**Use Instructions:** For spot treatments, apply this product prior to silking of corn.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside of target area for the same reason.

### **Hooded Sprayers**

**Use Instructions:** This product may be used through hooded sprayers for weed control between the rows of corn (all), including field corn, sweet corn and popcorn. Only hooded sprayers that completely enclose the spray pattern may be used.

A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

When applying to corn that is grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows.

Follow these requirements:

- The spray hoods must be operated on the ground or skimming across the ground.
- Do not apply more than 1 quart of this product per acre per application.
- Corn must be at least 12 inches tall, measured without extending leaves.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 mph
- Maximum wind speed: 10 mph
- Use low-drift nozzles.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

**Precautions, Restrictions:** Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator. Do not graze or feed corn forage or fodder following applications of this product through hooded sprayers. Do not apply more than 3 quarts of this product per acre per year for hooded sprayer applications.

#### **Preharvest:**

**Use Instructions:** Make applications at least 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 3 quarts of this product per acre. For aerial applications, apply up to 1 quart of this product per acre.

**Precautions, Restrictions:** This product is not to be used for corn grown for seed because a reduction in germination or vigor may occur. Allow a minimum of 7 days between application and harvest.

#### **Post-harvest**

**Use Instructions:** This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

**Precautions, Restrictions:** Do not harvest or feed treated vegetation for 8 weeks following application.

## COTTON

**Types of Applications:** Preplant, preemergence, at-planting, hooded sprayer selective equipment, spot treatment, preharvest

### **Preplant, Preemergence, and At-planting**

**Use Instructions:** This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

### **Hooded sprayer, Selective Equipment**

**Use Instructions:** This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper application in cotton. Allow at least 7 days between application and harvest.

**Precautions, Restrictions:** See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

### **Spot treatment**

**Use Instructions:** For spot treatments apply this product prior to boll opening of cotton.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

### **Preharvest**

**Use Instructions:** This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the annual, perennial and woody brush tables. Apply 1 pint to 2 quarts of this product per acre for cotton regrowth inhibition. Allow a minimum of 7 days between application and harvest of cotton.

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

This product may be tank mixed with DEF® 6, Folex®, or Prep™ to provide additional enhancement of cotton leaf drop.

**Precautions, Restrictions:** Do not feed or graze treated cotton forage or hay following preharvest applications. DO NOT APPLY MORE THAN 1 QUART OF THIS PRODUCT PER ACRE BY AIR. Do not apply more than 2 quarts of this product per acre by ground. Do not apply to cotton growth for seed, as a reduction in germination or vigor may occur. performance.

## GRAIN SORGHUM (MILO)

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment, wiper applicators, preharvest and post-harvest

**Preplant, Preemergence, At-planting**

**Use Instructions:** This product may be applied before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

**Spot treatment and Wiper applications**

**Use Instructions:** This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.

**Precautions, Restrictions:** For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside of target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

**Preharvest**

**Use Instructions:** Make applications at 30% grain moisture or less.

**Precautions, Restrictions:** Do not apply more than 2 quarts of this product per acre. Allow a minimum of 7 days between application and harvest of sorghum. It is not recommended that sorghum grown for seed be treated, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

**Post-harvest**

**Use Instructions:** This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1 quart of this product per acre for control, or 1.5 pints of this product per acre for suppression.

**Precautions, Restrictions:** Do not harvest or feed treated vegetation for 8 weeks following application.

**PEANUTS**

**Types of Applications:** Preplant, preemergence, at-planting

**Use Instructions:** This product may be applied before, during or after planting peanuts. Applications must be made prior to the emergence of the crop.

**SOYBEANS**

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment, preharvest, selective equipment, hooded sprayers

**Preplant, Preemergence and At-planting**

**Use Instructions:** This product may be applied before, during or after planting soybeans. Applications must be made prior to the emergence of the crop.

The following tank mixtures may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

CANOPY®  
COMMAND®  
DUAL MAGNUM  
FUSION®  
INTRRO®/ALACHLOR

LINEX®  
LOROX®/LINURON  
METRIBUZIN 75  
MICRO-TECH®  
PURSUIT®

PURSUIT® PLUS  
SCEPTER®  
SQUADRON®  
STEALTH®

For improved burndown, this product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

**Annual weeds:** For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.

**Precautions, Restrictions:** The tank mixes listed in this section are not registered in California.

#### **Spot treatment**

**Use Instructions:** For spot treatments, apply this product prior to initial pod set in soybeans.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

#### **Preharvest**

**Use Instructions:** This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the annual, perennial and woody brush tables. This product may be applied using either aerial or spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

Apply after pods have set and lost all green color. Allow a minimum of 7 days between application and harvest of soybeans. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

**Precautions, Restrictions:** Do not graze or harvest treated crop for livestock feed within 25 days of last preharvest application. DO NOT APPLY MORE THAN 6 QUARTS PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS. DO NOT APPLY MORE THAN 1 QUART PER ACRE OF THIS PRODUCT BY AIR. Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.

#### **Selective equipment**

**Use Instructions:** This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

**Precautions, Restrictions:** See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

## **TREE FRUITS**

**Labeled Crops:** Apple, Apricot, Cherry (Sweet, Sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (All), Quince

**Types of Applications:** Weed control, middles (between rows of trees), strips (in row of trees), selective equipment.

**NOTE:** FOR USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO TREE FRUITS.

### **Restrictions on application equipment**

For cherries, any application equipment listed in this section may be used in all states.

For citron and olives, apply as post-directed spray only.

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no less than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees which have been planted in the orchard for 2 or more years. EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

**Precautions, Restrictions:** Allow a minimum of 1 day between last application and harvest for apple, crabapple, loquat, mayhaw, pear, quince.

Allow a minimum of 17 days between last application and harvest for apricot, cherry, nectarine, olive, peach, plum/prune.

## **VEGETABLE CROPS**

**Labeled Crops:** Amaranth, Arrugula, Artichoke (Jerusalem), Beans (All), Beet greens, Garden beets, Broccoli (All), Cabbage (Chinese), Cantaloupe, Cardoon, Cavalo Broccolo, Carrot, Cauliflower, Casaba melon, Celery, Celery (Chinese), Celeriac, Celtuce, Chard (Swiss), Chayote, Chervil, Chick peas, Chicory, Chrysanthemum, Collards, Corn salad, Crenshaw melon, Cress, Cucumber, Dandelion, Dock (sorrel), Eggplant, Endive, Fennel (Florence), Garlic, Gherkin, Ginseng, Gourds, Ground cherry, Guar, Honeydew melon, Honey ball melon, Horseradish, Kale, Kohlrabi, Leek, Lentils, Lettuce, Mango melon, Melons (All), Mizuna, Muskmelon, Mustard greens, Okra, Onion, Oriental radish, Parsley, Parsnips, Peas (All), Pepinos, Pepper (All), Persian Melon, Potato (Irish), Pumpkin, Purslane, Radish, Rape greens, Rhubarb, Rutabaga, Salsify, Shallot, Spinach, Squash (Summer, Winter), Sugar beets, Sweet potato, Tomatillo, Tomato, Turnip, Watercress, Watermelon, Yams.

**Use Instructions:** This product may be applied prior to the emergence of direct seeded vegetables or prior to transplanting vegetables.

**Precautions, Restrictions:** When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 0.5 inch natural rainfall or by applying water via sprinkler system.

For the following crops only, apply prior to planting. Allow at least 3 days between application and planting of cantaloupe, casaba melon, crenshaw melon, cucumber, eggplant, garlic, gherkin, gourds, ground cherry, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, pepper (all), persian melon, pumpkin, squash (summer, winter), tomatillo, tomato, watercress, and watermelon.

**Nonbearing Ginseng:** This product may be used for general weed control in established non-bearing ginseng. Direct applications so that there is no contact of this product with the ginseng plant. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, orchard guns or with wiper application equipment. Applications must be made at least one year prior to harvest. Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable plants. Contact of this product with other than matured brown bark can result in serious crop damage.

Wiper applicators may be used in rutabagas. Allow at least 14 days between application and harvest.

#### **VINE CROPS**

**Labeled Crops:** Grapes (raisin, table, wine), Kiwi fruit

**Types of Applications:** General weed control, middles (between rows), strips (in row), selective equipment.

**NOTE:** FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO VINE CROPS.

Applications should not be made when green shoots, canes or foliage are in the spray zone.

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make application with shielded sprayers or wiper equipment.

**Precautions, Restrictions:** Allow a minimum of 14 days between last application and harvest.

#### **ROUNDUP READY CROPS**

**NOTE:** USE OF THIS PRODUCT OVER "ROUNDUP READY" OR OTHER GLYPHOSATE TOLERANT CROPS MAY SUBJECT YOU TO THE RISK OF LOSS OF LICENSE RIGHTS TO PATENTED GLYPHOSATE TOLERANCE TECHNOLOGIES AND/OR LEGAL ACTION FOR INFRINGEMENT OF PATENTS TO THOSE GLYPHOSATE-TOLERANT TECHNOLOGIES. IF YOU ARE A LICENSED GROWER UNDER AN AGREEMENT WITH A GLYPHOSATE-TOLERANT SEED MANUFACTURER, PLEASE REFER TO YOUR LICENSE AGREEMENT TO DETERMINE WHETHER YOU MAY USE THIS PRODUCT WITHOUT RISK OF LOSING YOUR LICENSE OR OF LEGAL ACTION AGAINST YOU.

#### **ALFALFA WITH THE ROUNDUP READY GENE**

LOVELAND PRODUCTS, INC. RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene that provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Loveland representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

See the "ROUNDUP READY CROPS" section of this label booklet for general precautionary instructions for use in Roundup Ready crops. Do NOT combine the instructions in this section of the label with other instructions for alfalfa varieties that do not contain a Roundup Ready gene listed in the "ALFALFA, CLOVER, AND OTHER FORAGE LEGUMES" and "PASTURES" sections of this label booklet.

## **FOR WEED CONTROL APPLICATIONS IN SEED PRODUCTION OF ROUNDUP READY ALFALFA**

### **Application Instructions**

This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa grown for seed. In-crop applications may be made from emergence through the late vegetative stage and spot treatments may be made from early bud stage through seed harvest.

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

### **For aerial application:**

Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. DO NOT EXCEED 64 FLUID OUNCES OR 2 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label booklet for procedures. To avoid spray drift that may cause injury to any vegetation not intended for treatment.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready alfalfa. Follow the cleaning procedures specified on the label of the product(s) used. Alfalfa can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

### **Types Of Applications: Preplant, At-planting, Preemergence, Postemergence and Post-harvest of seed**

#### Maximum Allowable Combined Application Rates

Combined total per year for all applications: 8.0 quarts per acre.

Preplant, At-planting and Preemergence applications: 64 fl oz or 2 quarts per acre.

Total in-crop application rate from emergence through the late vegetative stage: 6.0 quarts per acre.

Spot-treatment during early bud stage through seed harvest (See the "SPOT TREATMENT AND WIPER APPLICATION" section and the "PRECAUTIONS, RESTRICTIONS" under the "ALFALFA, AND CLOVER" section of this label for complete instructions) : Apply spray-to- wet; do not apply to the point of runoff.

There are no rotational crop restrictions following applications of this product. For any crop NOT listed in the label booklet, applications must be at least 30 days prior to planting.

**Over-the-top applications:** Broadcast applications of this product may be made using ground or aerial equipment in-crop to Roundup Ready alfalfa from emergence through the late vegetative stage. Do not make broadcast applications of this product between the initiation of alfalfa budding and the harvest of seed. Any single over-the-top broadcast application of this product should not exceed 64 fluid ounces or 2 quarts per acre. Sequential applications of this product should be at least 7 days apart.

Due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain a Roundup Ready gene and will not survive or thrive after the first application of this product. To limit undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, a single application of at least 32 fluid ounces or 1 quart per acre of this product should be applied at or before the 3 to 4 trifoliate growth stage.

**Spot Treatment after late vegetative stage:** For late emerging weeds, this product may be applied as a spot treatment in Roundup Ready alfalfa grown for seed during the early bud stage through seed harvest. Applications made during this stage may result in reduced seed yield and quality and are the responsibility of the grower. Make applications on a spray-to-wet basis. Do not spray to the point of runoff. If a spot treatment is made after the late vegetative stage, harvested seed must not be used for alfalfa sprout production.

**Post-harvest applications:** Following harvest of Roundup Ready alfalfa seed, the stand may be managed for forage and hay production.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLE" in this label booklet. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some re-growth of weeds has occurred.

In addition to those weeds listed in the label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa seed production. Repeat applications may be necessary for complete control.

Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and are NOT recommended for over-the-top applications of this product.

**PRECAUTIONS AND RESTRICTIONS:** Do not make over-the-top broadcast applications of this product between the initiation of alfalfa budding and the harvest of Roundup Ready alfalfa seed. If a spot treatment of this product is made after the late vegetative stage, do not use harvested Roundup Ready alfalfa seed for alfalfa sprout production. Regardless of applications made, the use of harvested Roundup Ready alfalfa seed is not suitable, and is not recommended for production of alfalfa sprouts.

#### **FOR WEED CONTROL APPLICATIONS IN FORAGE AND HAY PRODUCTION OF ROUNDUP READY ALFALFA**

**Application Instructions:** This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa. Allow a minimum of 5 days between the last application and grazing, or, cutting and feeding of alfalfa forage and hay.

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial application:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre.

DO NOT EXCEED 64 FLUID OUNCES OR 2 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATION IN THAT STATE. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label booklet for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. **Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready alfalfa. Follow the cleaning procedures specified on the label of the product(s) used. Alfalfa can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

Types of applications: Preplant, At-planting, Preemergence and Postemergence  
**MAXIMUM ALLOWABLE APPLICATION RATES**

Combined total per year for all applications, including preplant during year of establishment: 8.0 quarts per acre

Combined total per year for in-crop applications for newly established and established stands: 6.0 quarts per acre (192 fl oz per acre)

Preplant, At-planting and Preemergence single applications: 2 quarts per acre (64 fl oz per acre)

**New Stand Establishment (seeding year)**

Prior to First Cutting During New Stand Establishment:

From emergence up to 4 trifoliate leaves: 64 fl oz or 2 quarts per acre

From 5 trifoliate leaves up to 5 days before first cutting: 64 fl oz or 2 quarts per acre

After First Cutting in Newly Established Stands:

In-crop application, per cutting, up to 5 days before cutting: 64 fl oz or 2 quarts per acre

**Established Stands (non-seeding year)**

In-crop applications, per cutting up to 5 days before cutting: 64 fl oz or 2 quarts per acre

There are no rotational crop restrictions following applications of this product. For any crop NOT listed in the label booklet, applications must be made at least 30 days prior to planting.

**Over-the-top applications:** This product may be applied postemergence to Roundup Ready alfalfa from emergence until 5 days prior to cutting. Any single over-the-top application of this product should not exceed 64 fluid ounces per acre. Sequential applications of this production should be at least 7 days apart.

**Attention:** Where Roundup Ready alfalfa is grown with a companion or cover crop, or is over seeded with a second species, over-the-top applications of this product will eliminate the non-Roundup Ready species.

During stand establishment, due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, a single application of at least 32 fluid ounces or 1 quart per acre of this product should be applied at or before the 3 to 4 trifoliate growth stage.

In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, applications of this product should be made after weeds have emerged but before alfalfa growth or re-growth interferes with application spray coverage of the target weeds.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLE" in this label booklet. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some re-growth of weeds has occurred.

In addition to those weeds listed in this label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.

Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and are NOT recommended for over-the-top applications of this product.

**PRECAUTIONS AND RESTRICTIONS:** Any single over-the-top application of this product should not exceed 64 fluid ounces or 2 quarts per acre. Sequential applications of this production should be at least 7 days apart. The combined total per year for all in-crop applications in newly established and established stands must not exceed 6.0 quarts (192 fluid ounces) per acre. Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay.

#### **Soybeans with the Roundup Ready Gene**

USE OF THIS PRODUCT IS INTENDED FOR POSTEMERGENCE APPLICATION ONLY ON SOYBEAN VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

- Applying this product to soybean varieties which are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene, since severe injury or destruction will result.
- Roundup Ready varieties must be purchased from an authorized seed supplier. Crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" soybean seed saved from previous year's production and replanted.
- The Roundup Ready designation indicates that the soybean contains a patented gene which provides tolerance to Loveland Products, Inc.'s Glyphosate brand herbicides. Information on Roundup Ready soybeans may be obtained by your seed supplier.

**NOTE:** The use of this product for in-crop applications over Roundup Ready soybean is not registered in California.

### **Application Instructions**

This product may be applied postemergence to Roundup Ready soybeans from the cracking stage throughout flowering.

Allow a minimum of 14 days between applications and harvest of soybeans.

### **Maximum Allowable Yearly Rates**

**Preplant:** Maximum amount of this product which can be applied prior to crop emergence is 5 quarts/A.

**In-crop:** Maximum combined total of multiple in-crop applications from cracking throughout flowering is 3 quarts/A. The maximum rate for any single in-crop application is 2 quarts/A. The maximum combined total of this product which can be applied during flowering is 2 quarts/A.

**Preharvest:** Maximum amount of this product that can be applied after loss of green color in soybean pods until 14 days before harvest is 1 quart/A. The combined total of in-crop and preharvest SWAGGER applications may not exceed 3 quarts/A.

**Cropping Season:** Combined total per year for all applications may not exceed 8 quarts/A.

When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product.

There are no rotational crop restrictions following application of this product.

**For ground applications:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre as a broadcast spray. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use nozzles which provide a flat fan pattern. Check for even distribution of spray droplets.

**For aerial applications:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart of this product per acre. DO NOT APPLY DURING LOW LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. MAINTAIN APPROPRIATE BUFFER ZONES TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION.

AERIAL APPLICATIONS ON ROUNDUP READY SOYBEANS MAY BE MADE ONLY IN THE FOLLOWING STATES: ALABAMA, ARKANSAS, FLORIDA, GEORGIA, KANSAS, LOUISIANA, MISSISSIPPI, MISSOURI (BOOT-HEEL) ONLY, NORTH CAROLINA, OKLAHOMA, SOUTH CAROLINA, TENNESSEE AND TEXAS.

### **Annual Weed Rate Tables**

The following rates will provide control of labeled grasses and broadleaf weeds in conventional and no-till soybean production systems. Refer to the "ANNUAL WEEDS RATE TABLES ALPHABETICALLY BY SPECIES" on this label for application rates for specific annual weeds.

Loveland Products, Inc. will not warrant crop safety or weed control when Roundup Ready soybeans are treated with herbicides not specified on this label. Because of the potential for: 1) crop injury, 2) poor weed control from antagonism, and/or 3) rotational crop restrictions, herbicides not specified on this label should not be used, whether applied preemergence or applied postemergence as a tank mixture with SWAGGER.

This product may be used up to 64 fluid ounces per acre in any single application for control of annual weeds, where heavy weed densities exist. The maximum combined total of this product which can be applied during flowering is 64 fluid ounces per acre.

**NOTE:** The following instructions are based on a clean start at planting by using a burn-down application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of 16-64 fluid ounces per acre of this product can be used to control existing weeds prior to crop emergence.

#### **Midwest/Mid-Atlantic**

**Narrow row or drilled soybeans:** A single in-crop application of this product will provide effective control of labeled weeds. For best results, an initial application of 32 fluid ounces per acre (fl oz/A) on 4-8" weeds is specified. Weeds will generally be 4-8" tall to 3-5 weeks after planting. If the initial application is delayed and weeds are 8-18" tall, use 48 fl oz/A for best results.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 16-32 fluid ounces per acre may be necessary to control late flushes of weeds. The combined total application in-crop must not exceed 64 fluid ounces per acre.

**Wide row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 32 fluid ounces per acre (fl oz/A) on 4-8" weeds is specified. Weeds will generally be 4-8" tall 3 to 5 weeks after planting. If new flushes of weeds occur, they can be controlled by sequential applications of this product.

#### **Initial Treatment**

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
8	32
18	48

#### **Sequential Application (if needed)\***

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
1-3	16
3-6	24
6-12	32

\*Combined total application in-crop not to exceed 96 fluid ounces per acre.

**Giant ragweed:** Apply 32 fl oz/A when the weed is 8-12" tall to avoid the need for sequential application.

**Groundcherry, ladysthumb, Pennsylvania smartweed and morningglory:** Apply 32 fl oz/A to weeds 3-6" tall.

Some weeds, such as black nightshade, wooly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

### **Southeast**

**Narrow row, drilled, or wide-row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 32 fluid ounces per acre on 3-6" weeds is specified. Weeds will generally be 3-6' tall 2 to 3 weeks after planting.

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
3-6	32
6-12	48

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 16 to 32 fluid ounces per acre may be necessary to control late flushes of weeds.

### **Sequential Application (if needed)\***

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
2-3	16
3-6	24
6-12	32

\*Combined total application in-crop not to exceed 96 fluid ounces per acre.

**Florida pusley, hemp sesbania and spurred anoda:** Apply 32 fl oz/A to weeds 2-4" for the initial application. Apply 32 fl oz/A when these weeds are 3-6" tall if a sequential application is necessary.

**Morningglory, black nightshade, groundcherry, and Pennsylvania smartweed:** Apply 24 fl oz/A on 1-3" weeds, 32 fl oz/A on 3-6" weeds, or 48 fl oz/A on 6-12" weeds for the initial application.

Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcucumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

### **Delta/Mid-South**

**Narrow row, drilled, or wide row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. A sequential application will be required to control new flushes of weeds. For best results, an initial application of 32 fluid ounces per acre on 2-4" weeds is specified. Weeds will generally be 2-4" tall 2 to 3 weeks after planting.

### **Initial Treatment**

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
2-4	32
5-12	48

**Sequential Application\*****Weed Height  
(inches)****Rate  
(fluid oz/A)**2-3  
3-6  
6-1216  
24  
32

\*Combined total application in-crop not to exceed 96 fluid ounces per acre.

**Hemp sesbania and spurred anoda:** Apply a sequential treatment of 32 fl oz/A at 3-6" tall weeds if necessary.

Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcucumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

**Perennial Weeds Rate**

A 32 to 64 fluid ounces per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, maretail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed, and wirestem muhly.

For best results, allow perennial weed species to achieve at least 6" of growth before spraying with SWAGGER. For additional information on perennial weeds, see the "PERENNIAL WEEDS RATE TABLE ALPHABETICALLY BY SPECIES" on this label. For some perennial species, repeat applications may be required to eliminate crop competition throughout the growing season.

**Cotton with the Roundup Ready Gene – In Crop Applications**

WARNING: LOVELAND PRODUCTS, INC. INTENDS THIS PRODUCT FOR USE ONLY OVER-THE-TOP OF OR DIRECTED ONTO IMPROVED COTTON VARIETIES THAT ARE DESIGNATED AS COTTON WITH THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS AND TREES, OTHER THAN CROPS WITH THE ROUNDUP READY GENE, SINCE SEVERE INJURY OR DESTRUCTION WILL RESULT.

ROUNDUP READY COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION "ROUNDUP READY", INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT. IT IS UNLAWFUL TO SELL OR PLANT SAVED SEED.

COTTON WITH THE ROUNDUP READY GENE MAY ONLY BE USED FOR PLANTING A COMMERCIAL CROP IN A SINGLE SEASON. SEED MAY NOT BE SAVED FOR REPLANTING AND SAVED SEED MAY NOT BE SUPPLIED TO OTHERS FOR REPLANTING. LOVELAND PRODUCTS, INC. DOES NOT WARRANT THE SAFETY OR PERFORMANCE OF THIS PRODUCT WHEN USED ON "BROWN BAG" OR FARMER-MADE SEED.

### Application Instructions

This product will control many troublesome weeds with over-the-top, post-directed, hooded sprayer, or preharvest applications in Roundup Ready cotton.

### Maximum Allowable Yearly Rates

1. Combined total per year for all applications	8 quarts/A
2. Preplant, Preemergence applications	5 quarts/A
3. Total in-crop applications from cracking to layby	4 quarts/A
4. Maximum preharvest application rate	2 quarts/A

**For ground applications** with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial applications** apply this product in 3 to 15 gallons of water per acre.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or any other conditions which favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

There are no rotational crop restrictions following applications of this product.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready cotton. Follow the cleaning procedures specified on the label of the product(s) previously used. Cotton is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

**In addition to uses listed on this label, the following applications can be made:**

**Over-the-top application:** This product may be applied by aerial or ground application equipment postemergence to Roundup Ready cotton from the ground cracking stage until the four leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the fourth leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. Any single over-the-top broadcast application should not exceed 1 quart per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the four leaf (node) stage of development. Sequential over-the-top applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

**NOTE:** Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges. Apply a preplant burndown treatment of 16-48 fluid ounces per acre of this product.

**Post-directed or hooded applications:** This product may be applied using precision post-directed or hooded sprayers to Roundup Ready cotton through layby. Be especially careful to minimize contact of the spray with cotton leaves. At this stage, post-directed equipment should be used that directs the spray to the base of the cotton plants. Place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row. For best results, make applications while weeds are small (less than 3 inches). Minimize spray drift onto the leaves of the

cotton plants by maintaining low spray pressure (less than 30 PSI). Applications that contact the cotton leaves may result in boll loss, delayed maturity and/or yield loss. Any single post-directed application should not exceed 1 quart per acre of this product. No more than two applications should be made from the fifth leaf through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

**Salvage Treatment:** This treatment may be used after the four leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. One quart per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL and PERENNIAL" Weed Rate Tables of this label. SWAGGER applied at 1 quart per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: yellow and purple nutsedge, rhizome johnsongrass, common bermudagrass, silverleaf nightshade, trumpet creeper, and redvine. Fall preharvest applications may be required for control of these perennial weeds.

Tank mixtures with other herbicides may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control.

**Preharvest applications:** This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20% boll crack. Allow a minimum of 7 days between application and harvest. For specific instructions refer to the "COTTON" section on this label.

**NOTE:** SWAGGER will not enhance the performance of harvest aids when applied to Roundup Ready cotton. DO NOT APPLY SWAGGER TO CROPS GROWN FOR SEED.

#### **APPLICATION TO ROUNDUP READY FLEX COTTON**

##### **PRE-PLANT, AT-PLANTING, PRE-EMERGENCE, POST-EMERGENCE, PRE-HARVEST**

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for SWAGGER herbicide for essential product performance information.

The use of the over-the-top applications described in this supplemental label on cotton varieties other than Roundup Ready Flex cotton will cause crop injury and reduced yields. Drift of this product from applications made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready cotton may cause extensive injury including boll loss, delayed maturity and/or yield loss.

**NOTE:** The instructions provided in this label are specific to, and should only be used with, varieties designated as Roundup Ready Flex cotton. DO NOT combine the instructions in this label with those in the "ROUNDUP READY COTTON" section of the SWAGGER herbicide label booklet, or with any other Roundup Ready cotton or Roundup Ready Flex cotton instructions on labeling for this or other glyphosate-containing product. See "ANNUAL MAXIMUM USE RATE" in the "GENERAL INFORMATION" section of the SWAGGER herbicide label booklet, for additional information.

**TYPES OF APPLICATIONS:** Pre-plant, At-Planting, Pre-emergence, Post-emergence, Pre-harvest.

#### **Maximum Allowable Combined Application Quantities Per Season**

<b>Combined total per year for all applications</b>	<b>8.0 quarts per acre</b>
Calculate the combined rate to be used for all preplant, in-crop and preharvest applications, to ensure that the total does not exceed the maximum allowed rate per acre per year shown above.	
<b>Preplant, At-planting, Preemergence applications</b>	<b>5.0 quarts per acre</b>
Total in-crop applications from ground cracking to 60 percent open bolls	6.0 quarts per acre
Maximum allowed from 60 percent bolls open to 7 days prior to harvest	2.0 quarts per acre

**PRECAUTIONS and RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of the label booklet provided with the product container for general precautionary instructions for use in Roundup Ready crops.

#### **Pre-plant, Pre-emergence, At-Planting**

**USE INSTRUCTIONS:** This product may be applied before, during or after planting Roundup Ready Flex cotton. Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges.

#### **Post-emergence**

**USE INSTRUCTIONS:** When applied in accordance with this label, SWAGGER herbicide will control labeled annual grasses and broadleaf weeds in Roundup Ready Flex cotton. To maximize yield potential spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with one or more applications of this product. In general apply, an initial application of 1.0 quart per acre on 1 to 3 inch tall annual grass and broadleaf weeds. This product may be applied by ground application equipment at rates up to 1.5 quarts per acre per application post-emergence to Roundup Ready Flex cotton. In addition to broadcast applications, post-directed equipment may be used to achieve weed coverage.

**NOTE:** For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTION" in the label booklet for SWAGGER herbicide.

**PRECAUTIONS, RESTRICTIONS:** The maximum rate for any single in-crop application of this product is 1.5 quart per acre made using ground application equipment. In-crop application rates above 1.0 quart per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis. Except for pre-harvest use, do not exceed a maximum rate of 1.0 quart per acre of this product when making applications by air. Between layby and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 2.0 quarts per acre. The maximum combined total of all applications made from crop emergence through 60 percent open bolls must not exceed 6.0 quarts per acre.

#### **Pre-harvest**

**USE INSTRUCTIONS:** This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready Flex cotton after 60 percent boll crack. Up to 2.0 quarts of this product may be applied using either aerial or ground spray equipment.

**NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex cotton.

**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between application and harvest of Roundup Ready Flex cotton. Do not apply this product as a preharvest application to cotton grown for seed, as a reduction in germination or vigor may occur.

### **Ground Broadcast Equipment**

Use the specified rates of SWAGGER herbicide in 5 to 20 gallons of spray solution per acre. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete and uniform coverage of the target. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.

### **Aerial Equipment**

Apply this product in 3 to 15 gallons of water per acre. Except for pre-harvest use do not exceed a maximum rate of 1.0 quart per acre of this product when making applications by air. Extreme care must be used when applying this product to prevent injury to desirable plants and crops which do not contain a Roundup Ready gene. Drift may cause damage to any vegetation contacted to which treatment is not intended including boll loss, delayed maturity and/or yield loss on Roundup Ready cotton exceeding the 4 leaf (node) stage of development.

**PRECAUTIONS, RESTRICTIONS:** See the "AERIAL EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the SWAGGER herbicide label booklet for information on proper use and calibration of this equipment.

### **Sprayer Preparation**

Cotton is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use. It is important that the sprayer, including tank and hoses, and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready Flex cotton. Follow the cleaning procedures specified on the label of the product(s) previously used.

**ATTENTION:** USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY FLEX COTTON, HOWEVER, DUE TO THE SENSITIVITY OF COTTON FRUITING TO VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

Read the "CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY" in the label booklet for SWAGGER herbicide before using. For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

### **Seed Production of Canola with the Roundup Ready Gene**

THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT CANOLA IN PRODUCTION FIELDS OF CANOLA CONTAINING THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH WILL RESULT IF CANOLA VARIETIES WHICH DO NOT CONTAIN THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT.

ROUNDUP READY CANOLA VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, "ROUNDUP READY", INDICATES THE CANOLA VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT. IT IS UNLAWFUL TO SELL OR PLANT SAVED SEED.

CANOLA WITH THE ROUNDUP READY GENE MAY ONLY BE USED FOR PLANTING A COMMERCIAL CROP IN A SINGLE SEASON. SEED MAY NOT BE SAVED FOR REPLANTING AND SAVED SEED MAY NOT BE SUPPLIED TO OTHERS FOR REPLANTING. LOVELAND PRODUCTS, INC. DOES NOT WARRANT THE SAFETY OR PERFORMANCE OF THIS PRODUCT WHEN USED ON "BROWN BAG" OR FARMER-MADE SEED.

#### **Use**

This product will control non-glyphosate tolerant canola in seed production fields of canola containing the Roundup Ready gene. This product may be applied using ground spray equipment only. Apply 1 pint of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. A second application of 1 pint per acre may be applied, if needed to control non-glyphosate tolerant canola plants.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART OF THIS PRODUCT PER ACRE PER SEASON.

**Application timing** – This product can be applied to Roundup Ready canola from emergence to the pre-flower (early bolting) stage.

Treated canola may not be used for food or feed. Do not feed or graze treated canola. Do not process treated canola for food or feed.

### **PREPLANT, POSTEMERGENT AND/OR OVER-THE-TOP APPLICATIONS TO CANOLA WITH THE ROUNDUP READY GENE**

#### **General Information**

USE THIS PRODUCT ONLY ON CANOLA WHICH CONTAINS THE ROUNDUP READY GENE.

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

- Applying this product to canola which is not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene, since severe crop injury or destruction will result.
- The Roundup Ready designation indicates that canola contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready canola may be obtained from your seed supplier or Loveland Products, Inc. representative.

#### **Use**

This product will control many troublesome emerged weeds when applied preplant, preemergent and/or with over-the-top application in Roundup Ready canola. Allow a minimum of 60 days between last application and canola harvest.

#### **Maximum Allowable Combined Application Quantities Per Season**

- |   |            |
|---|------------|
| 1. Preplant and preemergence application              | 2 quarts/A |
| 2. Total in-crop application from emergence to 6-leaf | 1 quart/A  |

**For ground applications** with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial applications** apply this product in 3 to 15 gallons of water per acre.

DO NOT EXCEED A MAXIMUM RATE OF 16 OUNCES PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions which favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas in which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

**There are no rotational crop restrictions following applications of this product.**

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready canola. Follow the cleaning procedures specified on the label of the product(s) previously used. Canola is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

**Preplant or Preemergent Applications:** This product may be applied by aerial or ground application equipment prior to planting or emergence of canola. The maximum combined application rate from all preplant and preemergent applications should not exceed 2 quarts per acre per season.

**NOTE:** In no-till and stale seedbed systems, always use a burndown treatment to control existing weeds before canola emerges. Apply a preplant burndown treatment of 16-32 fluid ounces per acre of this product.

**Over-the-top applications:** This product may be applied by aerial or ground application equipment postemergence to Roundup Ready canola from emergence through the six-leaf stage of development. To maximize yield potential spray canola early to eliminate competing weeds. Any single over-the-top broadcast application should not exceed 16 ounces per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the six-leaf stage of development. Sequential over-the-top applications of this product must be at least 10 days apart.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL" Weed Rate Table of this label.

Tank mixtures with other herbicides, insecticides, or fungicides may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

For over-the-top uses on Roundup Ready crop varieties, crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

#### **Postemergence Applications to Corn with the Roundup Ready Gene**

USE THIS PRODUCT ONLY ON CORN SEED DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

- Applying this product to corn varieties which are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene since severe injury or destruction will result.
- Roundup Ready varieties must be purchased from an authorized seed supplier. Crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" corn seed saved from previous year's production and replanted.
- The Roundup Ready designation indicates that the corn contains a patented gene which provides tolerance to Loveland Products, Inc.'s Glyphosate brand herbicides. Information on Roundup Ready corn may be obtained from your seed supplier.

#### **Application Instructions**

This product may be applied postemergence to Roundup Ready corn during the period beginning at corn emergence and continuing through the 12-leaf stage or until corn height reaches 30 inches, whichever comes first. Single in-crop applications of this product are not to exceed 1 quart per acre. Sequential in-crop applications of this product should not exceed 2 quarts per acre per growing season. Total SWAGGER use should not exceed 8 quarts per acre per year.

Allow a minimum of 50 days between application of this product and harvest of corn forage and 7 days between application and harvest of corn grain. Allow a minimum of 14 days between in-crop applications of this product. THE USE OF ADDITIVES FOR IN-CROP APPLICATIONS TO ROUNDUP READY CORN IS PROHIBITED.

#### **Maximum Yearly Rates Allowed**

Preplant/Preemergence (Maximum)	5 quarts/A
Total in-crop applications from emergence to 12-leaf stage or 30 inches	2 quarts/A
<u>Maximum preharvest rate</u>	<u>1 quart/A</u>
Combined total per year for all applications	8 quarts/A

When applied as directed, this product controls annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product. Applications should be made to actively growing weeds before they reach the maximum size listed in the "ANNUAL" and "PERENNIAL" Weed Rate Tables on this label. Refer to the "MIXING" section of this label for proper use instructions.

There are no rotational crop restrictions following applications of this product.

**ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.**

Do not allow the herbicide solution to mist, drip, drift, or splash onto other desirable vegetation since minute quantities of this product can cause severe damage or destruction to crop plants in non-target areas. The likelihood of plant injury occurring from drift of this product is greatest when winds are gusty or in excess of 5 miles per hour. Even under lesser wind velocities, avoid conditions which allow spray drift to occur such as combinations of pressure and nozzle type that will result in fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR SPRAY PRESSURE.

**For ground applications:** Use the specified rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. See "WEEDS CONTROLLED" section below for specific rates. Carefully select proper nozzles and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial applications:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart per acre. See "WEEDS CONTROLLED" section below. AVOID DRIFT – DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

#### **Weeds controlled**

For specific rates of applications and instructions for control of various annual and perennial weeds, refer to the "ANNUAL" and "PERENNIAL" Weed Rate Tables on this label. SWAGGER at up to 1 quart per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: nutsedge, rhizome johnsongrass, quackgrass, Canada thistle, wirestem muhly.

**Sequential Applications:** Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product. The second application should be made after some regrowth has occurred.

#### **Tank mixtures**

A tank mixture of SWAGGER plus Micro-Tech® may be used for postemergence and residual control of annual weeds in corn. This tank mixture may be made during the period beginning at corn emergence and continuing until corn height reaches 5 inches.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

A SWAGGER tank mixture with atrazine, Rifle®, Clarity®, Permit®, 2,4-D may be used for postemergence control of additional annual weeds in corn. A SWAGGER tank mixture with atrazine may be made during the period beginning at corn emergence and continuing until corn height reaches 12 inches. A SWAGGER tank mixture with Rifle® or Clarity® at 0.125 to 0.25 lb per acre may be made during the period beginning at corn emergence and continuing until corn height reaches 30 inches. A SWAGGER tank mixture with Permit® may be made during the period beginning at corn emergence and continuing until corn is at the five leaf stage or corn height reaches 30 inches. A SWAGGER mixture with 2,4-D at 0.125 to 0.25 lb per acre may be made during the period beginning at corn emergence and continuing until corn is at the five leaf stage or corn height reaches 8 inches, whichever comes first.

Refer to the specific product label and observe all precautions, mixing and application instructions for all products used in tank mixtures.

## **FOR POSTEMERGENCE APPLICATIONS WITH DROP NOZZLES TO CORN UP TO 48" TALL WITH THE ROUNDUP READY GENE**

### **GENERAL INFORMATION**

USE OF THIS PRODUCT IS INTENDED FOR POSTEMERGENCE APPLICATION ONLY ON CORN HYBRIDS DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

- Applying this product to corn hybrids which are not designated as Roundup Ready will result in severe crop injury and yield loss.
- The Roundup Ready designation indicates that the corn contains a patented gene which provides tolerance to Loveland Products, Inc.'s Glyphosate brand herbicides. Information on Roundup Ready corn may be obtained from your seed supplier

### **APPLICATION INSTRUCTIONS**

The instructions provided in this section allow application to Roundup Ready corn using drop nozzles through 48 inches. The instructions printed in the "CORN WITH THE ROUNDUP READY GENE" section of the label booklet for SWAGGER along with those included in this section are all applications which can be made onto Roundup Ready corn during the complete cropping season. See the general "ROUNDUP READY CROPS" section of the SWAGGER label booklet for additional information.

When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product.

There are no rotational crop restrictions following applications of this product.

### **POSTEMERGENCE WITH DROP NOZZLES**

USE INSTRUCTIONS: For Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first, this product may be applied over-the-top broadcast or with drop nozzles. When corn height is 24 to 30 inches (free standing), for optimum spray coverage and weed control drop nozzles are recommended. For corn heights 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles adjusted to avoid spraying into the whorls of the corn plants.

Single in-crop applications of this product should not exceed 32 fluid ounces per acre. The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 64 fluid ounces per acre.

### **PREPLANT, POSTEMERGENT AND/OR OVER-THE-TOP APPLICATIONS TO SUGAR BEETS WITH THE ROUNDUP READY GENE**

USE OF THIS PRODUCT IS INTENDED FOR POSTEMERGENCE APPLICATION ONLY ON SUGAR BEET VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the sugar beet contains a patented gene, which provides tolerance to this product. Information on Roundup Ready sugar beet may be obtained from your seed supplier or Loveland Products representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

See the "ROUNDUP READY CROPS" section of the SWAGGER label booklet for general precautionary instructions for use in Roundup Ready crops. Do NOT combine these instructions with other s made for crop varieties that do not contain a Roundup Ready gene listed in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" sections of the SWAGGER label booklet.

**TYPES OF APPLICATIONS:** Preplant, At-Planting, Preemergence, Postemergence (In-crop)  
**APPLICATION INSTRUCTIONS**

## MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all application	8.0 quarts/A
Preplant, Preemergence applications	5.0 quarts/A
Emergence to 8 leaf stage	2.5 quarts/A
Between 8 leaf stage and canopy closure	2.0 quarts/A

**GENERAL PRECAUTIONS, RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Tank mixtures of this product with herbicides, insecticides or fungicides may result in crop injury or reduced weed control.

### Preplant, At-Planting, Preemergence

**USE INSTRUCTIONS:** This product may be applied before, during or after planting of Roundup Ready sugar beets.

**PRECAUTIONS, RESTRICTIONS:** Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 5.0 quarts per acre per season.

### Postemergence (In-crop)

**USE INSTRUCTIONS:** This product may be applied over the top of Roundup Ready sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

**RESTRICTIONS:** Follow all general precautionary instructions for use in Roundup Ready crops.

- The combined total application from crop emergence through harvest must not exceed 4.5 quarts per acre.
- The maximum rate for any single application between emergence to the 8 leaf stage is 1.5 quarts per acre.
- The maximum rate for any single application between the 8 leaf stage and canopy closure is 1.0 quart per acre.
- Allow a minimum of 30 days between last application and sugar beet harvest.
- For any crop NOT listed in the "CROPS" section of this label booklet, applications must be at least 30 days prior to planting.

## ANNUAL WEEDS RATE TABLES ALPHABETICALLY BY SPECIES

Water carrier volumes of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications.

Apply to actively growing annual weeds.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment. For those rates less than 48 fluid ounces per acre, this product may be used up to 48 fluid ounces per acre where heavy weed densities exist.

Refer to this map for location of the regions listed in the annual weed tables below.



ANNUAL WEEDS RATE TABLE, NORTH AND SOUTH REGIONS

WEED SPECIES	REGION	RATE (FLUID OUNCES PER ACRE)					
		12	16	24	32	40	48
		MAXIMUM HEIGHT/LENGTH					
Amoda, spurred		-	1"	2"	3"	5"	8"
Barley		-	18"	18"+	-	-	-
	West	12"	-	-	-	-	-
Barnyardgrass	South	-	3"	5"	7"	9"	12"
	North	-	-	6"	12"	-	-
	West	6"	-	-	-	-	-
Bassia, fivehook		-	6"	-	-	-	-
Bittercress		-	12"	20"	-	-	-
Bluegrass, annual		6"	10"	-	-	-	-
Bluegrass, bulbous	West	-	6"	-	-	-	-
Brome, downy <sup>2</sup>		6"	-	-	-	-	-
Brome, Japanese		-	6"	-	24"	-	-
Browntop panicum		-	6"	8"	12"	-	24"
Burcucumber		-	-	6"	12"	-	-
Buttercup		-	12"	20"	-	-	-
Carolina foxtail		-	20"	-	-	-	-
Carolina geranium		-	-	-	4"	-	9"
Carpetweed		-	-	6"	12"	-	-
Cheat		-	6"	20"	-	-	-
Chervil		-	20"	-	-	-	-
Chickweed		-	12"	18"	-	-	-
	West	-	6"	-	-	-	-
Cocklebur		-	12"	18"	24"	-	-
Copperleaf, hophornbeam		-	1"	2"	3"	4"	6"
Copperleaf, Virginia		-	1"	2"	3"	4"	6"
Corn		-	12"	20"	-	-	-
	West	-	6"	-	-	-	-
Corn speedwell		-	12"	-	-	-	-
Crabgrass		-	12"	18"	-	-	-
Cutleaf evening primrose		-	-	-	3"	-	6"
Dwarfdandelion		-	20"	-	-	-	-
	West	-	12"	-	-	-	-
Eastern mannagrass		-	8"	12"	-	-	-
Eclipta		-	4"	8"	12"	-	-

Annual Weeds Rate Table, North and South Regions cont'd.:

WEED SPECIES	REGION	RATE (FLUID OUNCES PER ACRE)					
		12	16	24	32	40	48
		MAXIMUM HEIGHT/LENGTH					
Fall panicum	South	-	4"	6"	8"	12"	24"
	North	-	6"	12"	18"	-	-
	West	-	12"	-	-	-	-
False dandelion		-	20"	-	-	-	-
False flax, smallseed		-	12"	-	-	-	-
Fiddleneck		-	-	-	6"	-	12"
Field pennycress		-	6"	12"	-	-	-
Filaree		-	-	-	-	-	12"
Fleabane, annual		-	6"	20"	-	-	-
Fleabane, hairy ( <i>Conyza bonariensis</i> )		-	6"	-	-	-	-
Fleabane, rough		-	3"	6"	12"	-	-
Florida pusley		-	-	-	12"	-	-
Foxtail	South	-	8"	12"	20"	-	-
	North	18"	18"+	-	-	-	-
	West	8 fl. oz. up to 12"					
Goatgrass, jointed		-	6"	-	-	-	-
Goosegrass		-	3"	5"	8"	-	18"
Grain sorghum (milo)		-	6"	12"	20"	-	-
Groundsel, common		-	6"	-	-	-	-
Hemp sesbania		-	-	2"	4"	6"	8"
Henbit		-	-	-	6"	-	20"
	West	-	6"	-	-	-	-
Horseweed/Marestail	South	-	-	12"	30"	-	-
( <i>Conyza canadensis</i> )	North/West	-	6"	12"	18"	-	-
Itchgrass		-	6"	12"	18"	-	-
Jimsonweed		-	6"	-	12"	-	-
Johnsongrass,	South	-	-	18"	-	-	-
seedling	North/West	-	12"	18"	-	-	-
Junglerice		-	3"	5"	7"	9"	12"
Knotweed		-	3"	8"	12"	-	20"
Kochia <sup>1</sup>		-	3 to 6"	12"	-	-	-
Lambsquarters		-	6"	8"	12"	-	20"
Little barley		-	20"	-	-	-	-
London rocket		-	6"	-	-	-	-
Mayweed		-	-	2"	6"	12"	18"
Morningglory		-	-	2"	4"	-	6"
( <i>Lomoea</i> spp.)							
Mustard, blue		6"	-	-	-	-	-
Mustard, tansy		6"	12"	20"	-	-	-
Mustard, tumble		6"	-	-	-	-	-
Mustard, wild		6"	12"	18"	-	-	-
Nightshade, black		-	6"	12"	-	-	-
Oats		-	6"	20"	-	-	-
Pigweed		-	12"	18"	24"	-	-

Annual Weeds Rate Table, North and South Regions cont'd.:

WEED SPECIES	REGION	RATE (FLUID OUNCES PER ACRE)					
		12	16	24	32	40	48
		MAXIMUM HEIGHT/LENGTH					
Plains/Tickseed <b>Coreopsis</b>		-	5"	12"	18"	-	-
Prickly lettuce		-	6"	12"	20"	-	-
Purslane		-	-	-	6"	-	12"
Ragweed, common	South	-	4"	6"	8"	-	12"
	North	-	6"	12"	18"	-	-
Ragweed, giant		-	-	4"	6"	-	11"
Red rice		-	-	-	4"	-	-
Russian thistle		-	-	-	6"	-	-
Rye	South	-	6"	20"	60"	-	-
	North	-	18"	18"+	-	-	-
	West	12"	-	-	-	-	-
Ryegrass		-	-	-	6"	-	7"+
Ryegrass, Italian	West	-	6"	-	-	-	-
Sandbur, field		12"	-	-	-	-	-
Shattercane		-	12"	18"	-	-	-
	West	12"	-	-	-	-	-
Shepherdspurse		-	6"	12"	-	-	-
Sicklepod		-	-	2"	4"	-	8"
Signalgrass, broadleaf		-	3"	5"	7"	9"	12"
Smartweed, ladythumb		-	4"	6"	8"	-	12"
Smartweed, Pennsylvania		-	4"	6"	8"	-	12"
Sowthistle, annual	North/South	-	-	-	6"	-	12"
	West	-	6"	-	-	-	-
Spanishneedles		-	-	-	8"	-	18"
Speedwell, purslane		-	12"	-	-	-	-
Sprangletop		-	6"	12"	20"	-	-
Spurge, Annual	West	-	6"	-	-	-	-
Spurge, prostrate		-	6"	12"	20"	-	-
Spurge, spotted		-	6"	12"	20"	-	-
Spurry, umbrella		6"	-	-	-	-	-
Stinkgrass		12"	-	-	-	-	-
Sunflower		-	12"	18"	-	-	-
Teasweed/Prickly sida		-	1"	2"	3"	4"	6"
Texas panicum		-	6"	8"	12"	-	24"
	West	-	12"	-	-	-	-
Velvetleaf	South	-	2"	3"	4"	5"	8"
	North	-	3"	6"	12"	-	-
Virginia pepperweed		-	18"	-	-	-	-
Waterhemp		-	-	6"	12"	-	-
Wheat	South	-	6"	30"	-	-	-
	North/West	-	18"	18"+	-	-	-
Wheat (overwintered)		-	6"	18"	-	-	-
Wild oats		-	12"	-	-	-	-
Witchgrass		-	12"	-	-	-	-
Wooly cupgrass		-	6"	12"	-	-	-
Yellowrocket		-	-	12"	20"	-	-

Weeds without a specific region include all regions.

<sup>1</sup>Do not treat kochia in the button stage

<sup>2</sup>For control of Downy brome in no-till systems, use 16 fluid ounces per acre.

#### **Annual Weeds – Water Carrier Volumes of 10 to 40 Gallons Per Acre**

Apply 1 to 1.5 quarts of this product per acre. Use 1 quart per acre if weeds are less than 6 inches tall and 1.5 quarts per acre if weeds are over 6 inches tall.

These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications.

#### **Annual Weeds – Tank Mixtures with 2,4-D or Rifle**

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

12 to 16 fluid ounces of this product plus 0.25 pounds a.i. of Rifle or 0.5 pounds a.i. of 2,4-D per acre will control the following weeds with the maximum height or length indicated: 6" – prickly lettuce, maretail/horseweed (*Conyza canadensis*), morningglory (*Ipomoea* spp.), kochia (Rifle only); 12" – cocklebur, lambsquarters, pigweed, Russian thistle.

16 fluid ounces of this product plus 0.5 pounds a.i. of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.

12 fluid ounces of this product plus 0.25 pounds a.i. of Rifle or 0.5 pounds a.i. of 2,4-D per acre will control foxtail up to 18".

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Rifle is applied within 45 days of planting.

**DO NOT APPLY RIFLE OR 2,4-D TANK MIXTURES BY AIR IN CALIFORNIA.**

#### **PERENNIAL WEEDS RATE TABLE ALPHABETICALLY BY SPECIES**

Apply to actively growing perennial weeds.

**NOTE:** If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

For hand-held sprayers, prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

**Spray Solution**

<b>Desired Volume</b>	<b>Amount of SWAGGER</b>					
	<b>1/2%</b>	<b>1%</b>	<b>1½%</b>	<b>2%</b>	<b>5%</b>	<b>10%</b>
1 Gal	2/3 oz	1 1/3 oz	2oz	2 2/3 oz	6 1/2 oz	13 oz
25 Gal	1 pt	1 qt	1 1/2 qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1 1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Comments</b>
Alfalfa	1	3-10	2%	Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to retreatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	4	3-20	1.5%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	-	-	1-2%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Bahiagrass	3-5	3-20	2%	Apply when most plants have reached the early head stage.
Bentgrass	1.5	10-20	2%	For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bent grass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.
Bermudagrass	3-5	3-20	2%	For control apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (knotgrass)	1-1.5	5-10	2%	Apply 1.5 quarts of this product in 5 to 10 gallons of water per acre. Apply when water bermuda grass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. Fall applications only: Apply 1 quart of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water bermudagrass that is 12 to 18 inches in length. This product is not registered in California for use on water bermudagrass.
Bindweed, field	0.5-5	3-20	2%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. For control, apply 4 to 5 quarts of this product per acre west of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
				<p>killing frost. Also for control, apply 2 quarts of this product plus 0.5 pounds a.i. of Rifle in 10 to 20 gallons of water per acre. Do not apply by air. For suppression on irrigated agricultural land, apply 1 to 2 quarts of this product plus 1 pound a.i. of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only.</p> <p>Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth. For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.</p> <p>In California only, apply 1 to 5 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.</p>
Bluegrass, Kentucky	1-2	3-40	2%	<p>Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.</p>
Blueweed, Texas	3-5	3-40	2%	<p>Apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.</p>
Brackenfern	3-4	3-40	1-1.5%	<p>Apply to fully expanded fronds which are at least 18 inches long.</p>
Bromegrass, smooth	1-2	3-40	2%	<p>Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.</p>

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
Bursage, woolly-leaf	-	3-20	2%	For control, apply 2 quarts of this product plus 1 pint of Rifle per acre. For partial control, apply 1 quart of this product plus 1 pint of Rifle per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond <u>flowering</u> .
Canarygrass, reed	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	3-5	3-40	2%	Apply when most plants have reached the early <u>head stage</u> .
Clover; red, white	3-5	3-20	2%	Apply when most plants have reached the early <u>bud stage</u> .
Cogongrass	3-5	10-40	2%	Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.
Dallisgrass	3-5	3-20	2%	Apply when most plants have reached the early <u>head stage</u> .
Dandelion	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dock, curly	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dogbane, hemp	4	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum <u>emergence of dogbane has occurred</u> .
Fescue	3-5	3-20	2%	Apply when most plants have reached the (except tall) early head stage. Apply 3 quarts of this product per acre when most plants have reached boot-to-early seedhead stage of development. Fall applications only: Apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 1 pint per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Fescue, tall	1-3	3-40	2%	
Guineagrass	3	3-40	1%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.
Horsenettle	3-5	3-20	2%	Apply when most plants have reached the early <u>bud stage</u> .

<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Comments</b>
Horseradish	4	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, <u>apply in late summer or fall.</u>
Iceplant	-	-	1.5-2%	Iceplant should be at or beyond the early stage of bud growth. Thorough coverage is necessary for <u>best control.</u>
Jerusalem artichoke	3-5	3-20	2%	Apply when most plants are in the early bud stage.
Johnsongrass	0.5-3	3-40	2%	In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using the 1 quart per acre rate. For burndown of Johnsongrass, apply 1 pint of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage. Spot treatment (partial control or suppression) – Apply a 1 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and <u>complete.</u>
Kikuyugrass	2-3	3-40	2%	Spray when most Kikuyugrass is at least 8 inches in height (3 or 4-leaf stage of growth). Allow 3 or <u>more days after application before tillage.</u>
Knapweed	4	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, <u>apply in late summer or fall.</u>
Lantana	-	-	1.1.25%	Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.
Lespedeza	3-5	3-20	2%	Apply when most plants have reached the early bud stage.
Milkweed, common	3	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1-2	3-40	2%	Use 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre of in pasture, sod, or non crop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow <u>3 or more days after application before tillage.</u>
Mullein, common	3-5	3-20	2%	Apply when most plants are in the early bud stage.

<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Comments</b>
Napiergrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Nightshade, silver leaf	2	3-10	2%	Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.
Nutsedge; purple, yellow	0.5-3	3-40	1-2%	Apply 3 quarts of this product per acre or apply a 1 to 2 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers. Sequential applications: 1 to 2 quarts of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3 to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing plants, apply 1 pint to 2 quarts of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.
Orchardgrass	1-2	3-40	2%	Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Orchardgrass sods going to no-till corn: Apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.
Pampasgrass	-	-	1.5-2%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Phragmites	3-5	10-40	1-2%	For partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
Poison hemlock	-	-	1-2%	treatments may be necessary to maintain control. Visual control symptoms will be slow to develop. Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Quackgrass	1-3	3-40	2%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1 quart of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 2 quarts of this product. Do not tank mix with residual herbicides when using the 1 quart rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results. In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.
Redvine	0.75-2	5-10	2%	For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 2 quarts per acre. Apply specified rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Reed, giant	-	-	2%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	1-3	3-40	2%	In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using the 1 quart per acre rate.
Smartweed, swamp	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.
Spurge, leafy	-	3-10	2%	For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Rate Weed Species	Water (QT/A)	Hand-Held Volume	% Solution	Comments
Starthistle, yellow	2	10-40	2%	Best results are obtained when applications are made during the rosette, bolting and early flower stages.
Sweet potato, wild	-	-	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat <u>applications may be required.</u>
Thistle, artichoke	-	-	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat <u>applications may be required.</u>
Thistle, Canada	2-3	3-40	2%	Apply when most plants are at or beyond the bud stages of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage. For suppression, apply 1 quart of this product or 1 pint of this product plus 0.5 pound a.i. 2,4-D, in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.
Timothy	2-3	3-40	2%	For best results, apply when most plants have <u>reached the boot-to-head stage of growth.</u>
Torpedograss	4-5	3-40	2%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. <u>Fall treatments must be applied before frost.</u>
Trumpet creeper	2	5-10	2%	Partial control. Apply in late September or October, to plants which are at least 18 inches tall and have been growing 45-60 days since the last tillage operation. <u>Make applications at least 1 week before a killing frost.</u>
Vaseygrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Velvetgrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Wheatgrass, western	2-3	3-40	2%	For best results, apply when most plants have <u>reached the boot-to-head stage of growth.</u>

#### WOODY BRUSH AND TREES RATE TABLE ALPHABETICALLY BY SPECIES

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at a high moisture content and are flowering.

Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Comments</b>
Alder	3-4	3-40	1-1.5%	For control
Ash	2-5	3-40	1-2%	Partial control
Aspen, quaking	2-3	3-40	1-1.5%	For control
Bearmat (Barclover)	2-5	3-40	1-2%	Partial control
Beech	2-5	3-40	1-2%	Partial control
Birch	2	3-40	1%	For control
Blackberry	3-4	10-40	1-1.5%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a ¾ percent solution of this product. For control of blackberries after leaf drop and until a killing frost or as long as stems are green, apply 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.
Blackgum	2-5	3-40	1-2%	For control
Bracken	2-5	3-40	1-2%	For control
Broom; French, Scotch	-	-	1.5-2%	For control
Buckwheat, California	-	-	1-2%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	2-5	3-40	1-2%	Partial control
Catsclaw	-	-	1-1.5%	Partial control
Ceanothus	2-5	3-40	1-2%	Partial control
Chamise	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black pin	2-3	3-40	1-1.5%	For control
Coyote brush	-	-	1.5-2%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Dogwood	2-5	3-40	1-2%	Partial control
Elderberry	2	3-40	1%	For control
Elm	2-5	3-40	1-2%	Partial control
Eucalyptus	-	-	2%	For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian Peppertree)	2-5	3-40	1-2%	Partial control
Gorse	2-5	3-40	1-2%	Partial control
Hasardia	-	-	1-2%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	2-3	3-40	1-1.5%	For control

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
Hazel	2	3-40	1%	For control
Hickory	2-5	3-40	1-2%	Partial control
Honeysuckle	3-4	3-40	1-1.5%	For control
Hornbeam, American	2-5	3-40	1-2%	Partial control
Kudzu	4	3-40	2%	For control. Repeat applications may be required to maintain control.
Locust, black	2-4	3-40	1-2%	Partial control
Madrone	-	-	2%	Partial control. Apply to resprouts that are 3 resprouts to 6 feet tall. Best results are obtained with spring/early summer treatments.
Manzanita	2-5	3-40	1-2%	Partial control
Maple, red	2-4	3-40	1-1.5%	For control, apply a 1 to 1.5 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre.
Maple, sugar	-	-	1-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Monkey flower	-	-	1-2%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	2-4	3-40	1-2%	Partial control
Oak, post	3-4	3-40	1-1.5%	For control
Oak; northern, pin	-	-	1-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Oak; southern, red	2-3	3-40	1-1.5%	For control
Persimmon	2-5	3-40	1-2%	Partial control
Pine	2-5	3-40	1-2%	For control
Poison Ivy/ Poison oak	4-5	3-40	2%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	2-5	3-40	2%	Partial control
Redbud, eastern	2-5	3-40	1-2%	For control
Rose, multiflora	2	3-40	1%	For control. Treatments should be made prior to leaf deterioration by leaf-eating insects.
Russian olive	2-5	3-40	1-2%	Partial control
Sage, black	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	2-5	3-40	1-2%	Partial control
Sage brush, California	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	2	3-40	1%	For control
Salt-cedar	2-5	3-40	1-2%	For control
Sassafras	2-5	3-40	1-2%	Partial control
Sourwood	2-5	3-40	1-2%	Partial control
Sumac; poison, smooth, winged	2-4	3-40	1-2%	Partial control
Sweetgum	2-3	3-40	1-1.5%	For control
Swordfern	2-5	3-40	1-2%	Partial control
Tallowtree, Chinese	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak	-	-	2%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
Thimbleberry	2	3-40	1%	For control
Tobacco tree	-	-	1-2%	Partial control
Trumpet creeper	2-3	3-40	1-1.5%	For control
Vine maple	2-5	3-40	1-2%	Partial control
Virginia creeper	2-5	3-40	1-2%	For control
Waxmyrtle, southern	2-5	3-40	1-2%	Partial control
Willow	3	3-40	1%	For control

#### STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleansed, reconditioned, or destroyed.

**CONTAINER DISPOSAL Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org).

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

***Storage & Disposal cont'd.:***

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Container Disposal: Nonrefillable container.** Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. Box 1286, GREELEY, CO 80632.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PROD-

UCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

Arsenal, Clarity, Guardsman Max, Pendulum, Pursuit, Sahara, Scepter and Squadron are registered trademarks of BASF Corporation.

Bullet, Harness, Lariat, Micro-Tech and Roundup Ready are registered trademarks of Monsanto Company.

Canopy, Escort, Hyvar, Karmex, Krovar, Linex, Lorox, Oust and Telar are registered trademarks of E.I. duPont de Nemours & Company.

Command is a registered trademark of FMC Corporation.

Compadre, LI 700, Liberate, Rifle and Rifle Plus are registered trademarks of Loveland Products, Inc.

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Devrinol and Surflan are registered trademarks of United Phosphorus, Inc.

Endurance, Fusion, Princep, Solicam and Vanquish are registered trademarks of a Syngenta Group Company.

Folex is a registered trademark of AMVAC Chemical Corporation.

Garlon, Goal, Spike, TopNotch and Tordon are registered trademarks of Dow AgroSciences, LLC.

Bullet, Guardsman Max, Harness, Lariat, Micro-Tech, Tordon are restricted use pesticides.

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**FORMULATED FOR**



**P.O. BOX 1286, GREELEY, COLORADO 80632-1286**



United States  
Environmental Protection Agency  
Washington, DC 20460  
**Formulator's Exemption Statement**  
(40 CFR 152.85)

**Applicant's Name and Address**

Loveland Products, Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286

**EPA File Symbol/Registration Number**

34704-1033

**Product Name**

SWAGGER

**Date of Confidential Statement of Formula (EPA Form 8570-4)**

11-19-09

As an authorized representative of the applicant for registration of the product identified above, I certify that:

**(1) This product contains the following active ingredient(s):**

Glyphosate CAS# 38641-94-0  
Indolebutyric Acid CAS # 133-32-3  
Kinetin CAS # 525-79-1

**(2)** Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another producer, and is labeled for at least each use for which my product is proposed to be labeled.

**(3)** Indicate by checking (A) or (B) below which paragraph applies:

☐ (A) An accurate Confidential Statement of Formula (EPA FORM 8570-4) for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☒ (B) The Confidential Statement of Formula (CSF) (EPA Form 8570-4) referenced above and on file with the EPA is complete, current, and accurate and contains the information required on the current CSF.

**(4)** The following active ingredients in this product qualify for the formulator's exemption.

**Source**

Active Ingredient	Product Name	Registration Number
Glyphosate		
Indolebutyric Acid		
Kinetin	RADIATE	34704-909

\*Product ingredient source information may be entitled to confidential treatment\*

**Signature****Name and Title**

Edith Emory Registration Specialist

**Date**

2/16/10



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*Performance*

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*Quality*

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*Value*

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February 8, 2010

U. S. Environmental Protection Agency  
Office of Pesticide Programs (7504P)  
Document Processing Desk (AMEND)  
2777 S. Crystal Drive, Room S-4900,  
Arlington, VA 22202-4501

Attn: Erik Kraft – Team 25

RE: Swagger Herbicide (EPA Reg. No. 34704-1033)

Loveland Products, Inc. is submitting this Fast-Track Amendment to add Roundup-Ready crops to this label. This action is the result of the glyphosate technical suppliers listed on our CSF having added these crops to their technical labels.

Please find the following documents enclosed:

1. EPA Form 8570-1 Application for amendment
2. EPA Form 8570-27 Formulator's Exemption Statement
3. EPA Form 8570-34 Certification with Respect to Citation of Data
2. 1 copy of the proposed label with red text showing the crops to be added
3. 1 copy of the proposed label suitable for your files
4. One CD containing electronic versions of the above files
5. One Certificate with Respect to Data Integrity

If you have any questions, please feel free to call or contact me at [edith.emory@cpsagu.com](mailto:edith.emory@cpsagu.com) or telephone 970-534-3402.

Sincerely,

Edith Emory  
Registration Specialist

Enclosures



To: edith.ernst@cpsagu.com  
Cc: Jim Torrens/DC/USEPA/US, kraft.erik@epa.gov,  
Bcc:

Subject: Swagger Herbicide, EPA Reg. No. 34704-1033, Registered December 29, 2009: RE Phone  
Call 03/17/10

Dear Edith:

As of this date the outstanding requirements for the subject registration have not been addressed. Those requirements were stated in the Notice of Registration (NOR) signed by Erik Kraft, dated December 29, 2009. To address the requirements you must submit the following supporting information prior to shipment of this product:

1. Revised labeling as described in the NOR.
2. Submit a revised Formulator's Exemption Statement on EPA Form 8570-27. Only the products used in the manufacture of Swagger Herbicide may be listed on that form.
3. All claims on the labeling of the subject product must also appear on the labeling of the products from which it is manufactured (derived). Any claims not on the labeling of those products must be deleted.
4. Please submit a matrix listing of the use-sites on the final printed labeling, juxtapositioned against the use-sites on the labeling of products used in the manufacture of Swagger Herbicide. If a use-site does not appear on all labeling, the use-site must be deleted from the labeling of Swagger Herbicide.
5. Submit Letters to all Data Submitters offering to pay for the use of data, as required by FIFRA 3(c)(2)(b), for this Agency's Records, if not covered by the Formulator's Exemption Statement.
5. Do not ship this product prior to making these corrections.

Please call me if there are any question regarding the above comments.  
Eugene Wilson (703-304-6103)

Swagger (EPA Reg. No. 34704-1033).

Trostle, Mark

to:

Erik Kraft, Jim Tompkins

01/25/2010 08:15 PM

Cc:

"Trostle, Mark", Eugene Wilson, "Emory, Edie"

Show Details

Dear Erik,

Thank you for your review of Loveland Products registration application for Swagger (EPA Reg. No. 34704-1033). The EPA Stamped Accepted label acceptance letter, point #8 declares that we must delete all the Roundup Ready crops from this label. Here is the exact quote.

8. You must delete all the roundup ready crop sections from the label (the 2 products that you are taking the formulator's exemption for do not list roundup ready crops on their labels, you may add these uses at a later time once data compensations issues have been addressed) including: **ROUNDUP READY ALFALFA, SOYBEANS WITH THE ROUNDUP READY GENE, COTTON WITH THE ROUNDUP READY GENE, ROUNDUP READY FLEX COTTON, ROUNDUP READY CANOLA, ROUNDUP READY CORN, ROUNDUP READY CORN UP TO 48", and ROUNDUP READY SUGAR BEETS.** You must submit a revised formulators exemption form listing only the 2 products that you are taking the formulator's exemption for.

This EPA requirement causes us great concern; this product was developed for use on glyphosate-tolerant crops. Without those crops on the label, we are left with a product that misses its primary market purpose – a product that will kill or reduce weed pressure, and enhance the growth of the crop that is left. There is no reason for us to formulate and market this product without those crops on the label; it is not economically viable. Also, please note that it has come to LPI's attention that conventional seed is no longer available for use by farmers so the EPA requirement to remove the RR crops in short has killed the label!

We are in communication with [REDACTED] (our listed CSF glyphosate technical sources), and both companies are submitting applications and appropriate paperwork (including data compensation offers to Monsanto) to add Roundup Ready crops to their technical labels. In light of that, we are requesting that you remove #8 of your comments and allow Loveland Products to proceed with the label as written, with the Roundup Ready crops as listed.

Alternately, Loveland Products can also submit a new basic CSF listing a glyphosate technical source approved for Roundup Ready crops; however, after a lengthy search of NPIRS there doesn't appear to be one that has all of the glyphosate-tolerant crops on it. [REDACTED]

We're curious how other products registered for use on Roundup Ready crops have achieved approval as there does not appear to be a technical source that has the requested RR crops. If EPA has approved a technical label with these uses please supply us the EPA registration number so we may submit an updated CSF to EPA.

Thanks in advance for your consideration; we need to begin manufacturing and marketing of this product in just a few weeks, and we eagerly anticipate your response concerning our request for the removal of comment #8.

Also, Mark Trostle the Director of Registrations and Regulatory Affairs for Loveland Products will be in DC for meeting on Wednesday and Thursday this week and would like to request a meeting with Jim Tompkins and you on Thursday afternoon to discuss this urgent matter for LPI.

*~Edie Emory*

Registrations Specialist ~ Loveland Products, Inc.  
PO Box 1286 ~ Greeley CO ~ 80632  
office 970-534-3402 ~ cell 970-301-3802 ~ fax 970-356-8926  
email [edith.emory@cpsagu.com](mailto:edith.emory@cpsagu.com)

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UR



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

34704-1033

Date of Issuance:

12-29-07

Term of Issuance: Conditional

Name of Pesticide Product:

Swagger Herbicide

## NOTICE OF PESTICIDE:

☒ Registration  
☐ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Loveland Products Inc.  
7251 West 4<sup>th</sup> Street  
P.O. Box 1286  
Greeley, CO 80632-1286

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA provided you agree in writing to:

1. Submit the following outstanding product chemistry data requirement: one year storage stability and corrosion characteristics study, within one year from the date of this letter.

Signature of Approving Official:

James Tompkins, Product Manager (25)  
Herbicide Branch, Registration Division (7505P)

Date:

12-29-07

2. Revise the Hazards to Humans and Domestic Animals section to read "Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes, or clothing."
3. Add "or rinseate" after "washwaters" on page 2 of the label.
4. On page 3, change "General Information" to "Product Information". On page 5, change "6 lb ai/A" to "6 lb ai glyphosate/A". On page 6, change "General Information" to "Product Information".
5. On page 8, change "where states have more stringent regulations, they should be observed" to "where states have more stringent regulations, they must be observed". Change "the applicator should be familiar" to "the applicator must be familiar". Change "applications should not" to "applications must not" (application height). Change "application should be avoided" to "application must be avoided" (wind section). On page 9, change "every applicator should be familiar" to "every applicator must be familiar". Change "applications should not occur" to "applications must not occur" (temperature inversions). Change "this pesticide should only be" to "this pesticide must only be" (sensitive areas).
6. On page 17, add "to the extent consistent with applicable law" in front of "such damage shall be the sole" (precautions, restrictions). Change "it is not recommended that corn grown for seed be treated" to "This product is not to be used for corn grown for seed because...".
7. On page 21 and 22, delete "general" from "general weed control" and "general use directions".
8. You must delete all the roundup ready crop sections from the label (the 2 products that you are taking the formulator's exemption for do not list roundup ready crops on their labels, you may add these uses at a later time once data compensations issues have been addressed) including: ROUNDUP READY ALFALFA, SOYBEANS WITH THE ROUNDUP READY GENE, COTTON WITH THE ROUNDUP READY GENE, ROUNDUP READY FLEX COTTON, ROUNDUP READY CANOLA, ROUNDUP READY CORN, ROUNDUP READY CORN UP TO 48", and ROUNDUP READY SUGAR BEETS. You must submit a revised formulators exemption form listing only the 2 products that you are taking the formulator's exemption for.

A stamped copy of the label is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. If you have any questions please contact Erik Kraft at 703-308-9358 or [kraft.erik@epa.gov](mailto:kraft.erik@epa.gov).



# SWAGGER

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

12-21-09

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

34704-1033

**AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.**

## ACTIVE INGREDIENT

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt	41.0000%
**3-Indolebutyric acid (IBA)	0.0500%
***Cytokinin, as Kinetin	0.0088%
OTHER INGREDIENTS:	58.9412%
<b>TOTAL</b>	<b>100.0000%</b>

\*Contains 480 grams per liter or 4 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of its isopropylamine salt. Equivalent to 356 grams per liter or 3 pounds per U.S. gallon of the acid, glyphosate.

\*\*Contains 0.612 grams per liter or 0.0050 pounds per U.S. gallon of the active ingredient, 3-Indolebutyric acid (IBA).

\*\*\*Contains 0.108 grams per liter or 0.0009 pounds per U.S. gallon of the active ingredient, Cytokinin, as Kinetin.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

## FIRST AID

<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.**

EPA REG. NO. 34704-

EPA EST. NO. 34704-MS-001

NET CONTENTS 1 GAL. (3.78 L)  
IHT

060809 REVISIONS 11/25/09

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful If absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

**DOMESTIC ANIMALS:** This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary, gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist more than 24 hours.

**PERSONAL PROTECTIVE EQUIPMENT: (PPE)**

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash contaminated clothing before reuse.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

**PHYSICAL OR CHEMICAL HAZARDS**

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

**DO NOT MIX, STORE, OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

Read the entire label before using this product. Use only according to label instructions. Read the "CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY" statement at the end

of the label before buying or using. If terms are unacceptable, return at once unopened.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow working entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Chemical resistant gloves made of any waterproof material,
- Shoes plus socks.

### GENERAL INFORMATION

**Product Description:** This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and through mixing with water or other carriers according to label instructions. Additional surfactants, additives containing surfactant, buffering agents, pH adjusting agents, or defoaming products may be utilized if desired. Adjuvants such as **Weather Gard Complete**, **LI 700®**, or **Liberate®** used at 0.25% to 0.50% v/v. The use of Unfoamer is for defoaming.

See the MIXING section of this label for instructions.

The use of **Compadre®** at .125% v/v is for drift control and defoaming.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above ground growth and deterioration of underground plant parts.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial, woody brush and trees rate tables for information on controlling specific weeds.

Always use the higher rate of this product per acre within the specified range when weed growth is heavy or dense weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

**Cultural Considerations:** Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the specified stage for treatment.

#### INFORMATION ON WEED RESISTANCE

Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Although rare in occurrence, any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices.

Weed resistance management techniques for Group 9 herbicides include:

- Ensure optimum weed control by making applications at the right time (correct weed size) and utilizing the label rate for the most difficult to control weed in your field.
- Base decisions on local needs and use the tool(s) necessary to obtain optimum weed control and minimize weeds escapes.
- Avoid tank-mixtures that reduce this product's efficacy (through antagonism) or which encourage rates of this product below the labeled rates.
- Scout treated weed populations for escapes 2-4 weeks after application.
- Report any incidence of repeated non-performance of this product on a particular weed to the local retailer, county extension agent, or Loveland Products, Inc. representative.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

**Spray Coverage:** For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

**Mode of Action:** The active ingredient in this product inhibits an enzyme found only in plants that is essential to formation of specific amino acids.

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

**Tank Mixing:** This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

This product may be tank mixed with the products listed in this label providing the product tank-mixed is registered for use on this site.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly specified in this label. Mixing this product with herbicides or other materials not specified on this label may result in reduced performance.

**Annual Maximum Use Rate:** Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 2 gallons (6 lb a.i./A) of this product per acre per year.

#### **ATTENTION**

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation because minute quantities of this product can cause severe damage or destruction to the crop, plants, or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

**NOTE:** Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

#### **MIXING**

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

**NOTE:** REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

#### **MIXING WITH WATER**

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the specified amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

#### **TANK MIXTURE PROCEDURE**

This product may be tank mixed with the products listed in this label, providing the product tank-mixed is registered for use on this site.

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20 to 35-mesh screen or wetting basket over filling port.

2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
7. When nonionic surfactant is utilized, add this to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

**Tank Mix Compatibility Test:** Test Compatibility of the intended tank mixture before adding this product to the spray or mix tank. Add proportional amounts of each tank mix ingredient to a pint or quart jar, cap, shake, and let set 15 minutes. Formation of precipitates that do not readily re-disperse indicates an incompatible mixture that should not be used.

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

#### **MIXING FOR HAND-HELD SPRAYERS**

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

<b>Spray Solution</b>		<b>Amount of SWAGGER</b>				
<b>Desired Volume</b>	<b>1/2%</b>	<b>1</b>	<b>1 1/2%</b>	<b>2%</b>	<b>5%</b>	<b>10%</b>
1 Gal	2/3 oz	1 1/3 oz	2 oz	2 2/3 oz	6 1/2 oz	13 oz
25 Gal	1 pt	1 qt	1 1/2 qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1 1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the specified amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

#### **Ammonium Sulfate**

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in

the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

**NOTE:** When using ammonium sulfate, apply this product at rates specified in this label. Lower rates will result in reduced performance.

#### **Colorants or Dyes**

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's label.

#### **Drift Control Additives**

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the cautionary statements and other information appearing on the additive label. The use of **Compadre** at .125% v/v is for drift control and defoaming.

### **APPLICATION EQUIPMENT AND TECHNIQUES**

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

**Aerial** – Fixed Wing and Helicopter

**Ground Broadcast Spray** – Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

**Hand-Held and High-Volume Spray Equipment** – Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

\*This product is not registered in California or Arizona for use in mistblowers.

**Selective Equipment** – Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

**Injection Systems** – Aerial or ground injection sprayers.

**Controlled Droplet Applicator (CDA)** – Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

### **AERIAL SPRAY DRIFT MANAGEMENT**

#### **Spray Drift Management**

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from

aerial applications to agricultural field crops. These requirements do not apply to forestry applications nor to public health uses.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and follow the information covered in the Aerial Drift Reduction Advisory.

### **Aerial Drift Reduction Advisory**

(This section is advisory in nature and does not supersede the mandatory label requirements)

#### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

#### **Controlling Droplet Size**

- Volume – Use high flow rate nozzles to apply the highest practical spray volume.
- Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type – Use a nozzle type that is designated for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **Boom Length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **Application Height**

Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

#### **Wind**

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoid-

ed below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### **Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### **Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### **Aerial Equipment**

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL. This product plus Rifle® or 2,4-D tank mixtures may not be applied by air in California.

Use the specified rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 1 quart per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems. Fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for volumes and application rates.

Avoid direct application to any body of water.

**AVOID DRIFT – DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Ensure uniform application – To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS

PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

**Arkansas Only:**

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION. APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the specified rate of this product in 3 to 15 gallons of water per acre. Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough (droplets that are coarse and in the 300 to 500 (VMD) micron range) to avoid drift potential.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety. The distance of the outermost nozzles on the boom must not exceed 75% of the length of the wingspan or rotor. In many cases, reducing the distance to 65% of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.

Do not apply this product when wind speeds are in excess of 10 miles per hour.

Do not apply this product when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 mph.

Use the following guidelines when applications are made near crops or other desirable vegetation:

1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

**Arkansas, Louisiana, Mississippi, Missouri, and Tennessee Only:**

This product controls annual and perennial weeds listed on this label prior to planting or emergence of corn, cotton, rice, sorghum and soybeans, and following the harvest of any crop in the fall via aerial applications in these locations.

Aerial applications of this product may be made in fallow systems and conventional, reduced and zero tillage systems. For applications via aerial equipment, use the specified rates of this product in 3 to 10 gallons of water per acre. Do not exceed a rate of 3 quarts per acre.

The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser velocities, will allow spray drift to occur.

### **Ground Broadcast Equipment**

Use the specified rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the specified range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

### **Hand-Held and High-Volume Equipment**

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

For control of weeds listed in the annual weeds rate tables, apply a 0.5 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1 percent solution.

For best results, use a 2 percent solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 5 percent solution for annual and perennial weeds and a 5 to 10 percent solution for woody brush and trees.

### **Selective Equipment**

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label and only when specifically directed in cropping systems.

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

### **AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION**

Contact of the herbicide with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

### **Shielded and hooded applicators**

Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. **EXTREME CARE MUST BE EXERCISE TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

### **Wiper applicators and sponge bars**

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1 - day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

**For Rope or Sponge Wick Applicators** – Mix 1 gallon of this product in 2 gallons of water to prepare a 33 percent solution. Apply this solution to weeds listed in this section.

**For Porous-Plastic Applicators** – Solutions ranging from 33 to 100 percent of this product in water may be used in porous-plastic wiper applicators.

When applied as directed, this product **CONTROLS** the following weeds:

Corn, volunteer	Rye, common	Sicklepod	Starbur, bristly
Panicum, Texas	Shattercane	Spanishneedles	

When applied as directed, this product **SUPPRESSES** the following weeds:

Beggarweed, Florida	Guineagrass	Pigweed, redroot	Thistle, musk
Bermudagrass	Milkweed	Ragweed, giant	Vaseygrass
Dogbane, hemp	Nightshade, silverleaf	Smutgrass	Velvetleaf
Dogfennel	Ragweed, common	Sunflower	

### **Injection Systems**

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

### **Controlled Droplet Application (CDA) Equipment**

The rate of this product applied per acre by vehicle-mounted CDA Equipment must not be less than the amount specified in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of perennial weeds, apply a 20 to 40 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 4 quarts per acre).

Controlled droplet application (CDA) equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

### **CROPS (Alphabetical)**

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category.

Unless otherwise specified, applications may be made to control any weeds listed in the Annual, Perennial and Woody Brush tables shown at the end of this label. Also refer to the "SELECTIVE EQUIPMENT" section.

For any crop not listed in this "CROPS" section, applications must be made at least 30 days prior to planting.

For broadcast postemergent treatments, do not harvest for 8 weeks following application, unless otherwise specified.

When applying this product prior to transplanting crops into plastic mulch, residues may be removed from the plastic by 0.5 inches of water via sprinkler irrigation or natural rainfall.

The maximum use rate as stated on this product's labeling is determined as a total of this product combined with the use of all other sources of glyphosate or sulfosate, whether applied as mixtures or separately. Calculate application rates and ensure that the **total use** of this and other glyphosate and/or sulfosate containing products do not exceed stated maximum use rate.

### **ALFALFA AND CLOVER**

**Labeled Crops:** Alfalfa, clover.

**Types of Applications:** Dormant, preplant, preemergence, at-planting, spot treatment, wiper applicators, renovation, preharvest

#### **Dormant (Alfalfa only)**

**Use Instructions:** This product will control or suppress many weeds including quackgrass, downy brome and cheatgrass in dormant alfalfa. Apply 8 to 12 ounces per acre of this product. Apply in the spring to alfalfa that is dormant. Applications should be made after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliolate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliolate leaf of the alfalfa will cause growth reduction and reduced crop yield.

**Precautions, Restrictions:** Do not use ammonium sulfate when spraying dormant alfalfa with SWAGGER. Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated. Do not make more than one application per year. Allow 36 hours after application before grazing livestock or harvesting. Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off. Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.

#### **Preplant, Preemergence, and At-planting**

**Use Instructions:** This product may be applied before, during or after planting alfalfa and clover. Applications must be made prior to emergence of the crop.

**Precautions, Restrictions:** Remove domestic livestock before application and wait 8 weeks after

application before grazing or harvesting.

#### **Preharvest (Alfalfa only)**

**Use Instructions:** This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Use up to 1 quart of this product per acre. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

**Precautions, Restrictions:** Do not apply more than 1 quart of this product per acre as a preharvest treatment. Do not use for alfalfa grown for seed, as a reduction in germination or vigor may occur.

#### **Spot treatment or Wiper applications**

**Use Instructions:** This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

**Precautions, Restrictions:** Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

#### **Renovation**

**Use Instructions:** This product may be applied as a broadcast spray to existing stands of alfalfa, clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.

**Precautions, Restrictions:** Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

### **CEREAL CROPS**

**Labeled Crops:** Rice, Wheat (All)

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment (except rice), post-harvest, preharvest (wheat only), wiper applicators (wheat only)

Do not treat rice fields or levees when the field contains floodwater.

#### **Preplant, Preemergence and At-planting**

**Use Instructions:** This product may be applied before, during, or after planting of cereal crops. Applications must be made prior to emergence of the crop.

#### **Spot treatment (wheat only)**

**Use Instructions:** This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

### **Postharvest**

**Use Instructions:** This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures of 2,4-D or dicamba may be used.

**Precautions, Restrictions:** For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Do not harvest or feed treated vegetation for 8 weeks following application.

### **Preharvest (wheat only)**

**Use Instructions:** This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest.

The product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

**Precautions, Restrictions:** Do not apply more than 1 quart of this product per acre. Do not apply to wheat grown for seed, as a reduction in germination or vigor may occur.

### **Wiper applications (wheat only)**

**Use Instructions:** Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.

**Precautions, Restrictions:** Allow at least 35 days between application and harvest. Do not use roller applicators.

### **For nonselective control of listed annual weeds in small grain cropping systems (South Dakota only)**

**Use Instructions:** For ground applications, use 3 to 5 gallons of water per acre. For aerial applications, use 2 to 3 gallons of water per acre.

**Precautions, Restrictions:** The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. Adjust boom height on ground equipment to prevent streaked, overlapped or uneven applications. Avoid spraying when weeds are subject to moisture stress, when dust is on foliage, or when straw canopy covers the weeds.

### **Red Rice Control Prior To Planting Rice (Texas only)**

**Use Instructions:** Apply 1.5 quarts of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may only be partially controlled.

**Precautions, Restrictions:** Avoid spraying during low humidity conditions, as reduced control may result. DO NOT TREAT RICE FIELDS OR LEVEES WHEN THE FIELDS CONTAIN FLOOD WATER. DO NOT RE-FLOOD TREATED FIELDS FOR 8 DAYS FOLLOWING APPLICATION.

## CORN

**Types of Corn:** Field corn, seed corn, sweet corn and popcorn

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment, hooded sprayers, preharvest, post-harvest

### Preplant, Preemergence and At-planting

**Use Instructions:** This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop.

The following tank mixtures may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

ATRAZINE	HARNESS®	OUTLOOK®
BICEP MAGNUM®	HARNESS® XTRA	RIFLE®
BICEP II MAGNUM®	HARNESS® XTRA 5.6L	RIFLE PLUS®
BULLET®	INTRRO®/ALACHLOR	SIMAZINE
CADENCE®	LARIAT®	STEALTH®
CYANAZINE	LINEX®	TOPNOTCH®
DUAL® II MAGNUM®	LOROX®	
GUARDSMAN MAX®	MICRO-TECH®	

Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre. For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. See the map in the Annual Weeds section of this label for areas included.

For improved burndown, this product may be tank mixed with 2,4-D or dicamba.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

**Annual weeds** – For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.

**Precautions, Restrictions:** Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

The tank mixes listed in this section are not registered in California.

### Spot treatment

**Use Instructions:** For spot treatments, apply this product prior to silking of corn.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside of target area for the same reason.

### Hooded Sprayers

**Use Instructions:** This product may be used through hooded sprayers for weed control between the rows of corn (all), including field corn, sweet corn and popcorn. Only hooded sprayers that completely enclose the spray pattern may be used.

A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

When applying to corn that is grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows.

Follow these requirements:

- The spray hoods must be operated on the ground or skimming across the ground.
- Do not apply more than 1 quart of this product per acre per application.
- Corn must be at least 12 inches tall, measured without extending leaves.
- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 mph
- Maximum wind speed: 10 mph
- Use low-drift nozzles.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

**Precautions, Restrictions:** Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed corn forage or fodder following applications of this product through hooded sprayers. Do not apply more than 3 quarts of this product per acre per year for hooded sprayer applications.

#### **Preharvest:**

**Use Instructions:** Make applications at least 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 3 quarts of this product per acre. For aerial applications, apply up to 1 quart of this product per acre.

**Precautions, Restrictions:** It is not recommended that corn grown for seed be treated because a reduction in germination or vigor may occur. Allow a minimum of 7 days between application and harvest.

#### **Post-harvest**

**Use Instructions:** This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

**Precautions, Restrictions:** Do not harvest or feed treated vegetation for 8 weeks following application.

## COTTON

**Types of Applications:** Preplant, preemergence, at-planting, hooded sprayer selective equipment, spot treatment, preharvest

### **Preplant, Preemergence, and At-planting**

**Use Instructions:** This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

### **Hooded sprayer, Selective Equipment**

**Use Instructions:** This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper application in cotton. Allow at least 7 days between application and harvest.

**Precautions, Restrictions:** See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

### **Spot treatment**

**Use Instructions:** For spot treatments apply this product prior to boll opening of cotton.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

### **Preharvest**

**Use Instructions:** This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the annual, perennial and woody brush tables. Apply 1 pint to 2 quarts of this product per acre for cotton regrowth inhibition. Allow a minimum of 7 days between application and harvest of cotton.

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

This product may be tank mixed with DEF® 6, Folex®, or Prep™ to provide additional enhancement of cotton leaf drop.

**Precautions, Restrictions:** Do not feed or graze treated cotton forage or hay following preharvest applications. DO NOT APPLY MORE THAN 1 QUART OF THIS PRODUCT PER ACRE BY AIR. Do not apply more than 2 quarts of this product per acre by ground. Do not apply to cotton growth for seed, as a reduction in germination or vigor may occur. performance.

## GRAIN SORGHUM (MILO)

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment, wiper applicators, preharvest and post-harvest

**Preplant, Preemergence, At-planting**

**Use Instructions:** This product may be applied before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

**Spot treatment and Wiper applications**

**Use Instructions:** This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.

**Precautions, Restrictions:** For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside of target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

**Preharvest**

**Use Instructions:** Make applications at 30% grain moisture or less.

**Precautions, Restrictions:** Do not apply more than 2 quarts of this product per acre. Allow a minimum of 7 days between application and harvest of sorghum. It is not recommended that sorghum grown for seed be treated, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

**Post-harvest**

**Use Instructions:** This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1 quart of this product per acre for control, or 1.5 pints of this product per acre for suppression.

**Precautions, Restrictions:** Do not harvest or feed treated vegetation for 8 weeks following application.

**PEANUTS**

**Types of Applications:** Preplant, preemergence, at-planting

**Use Instructions:** This product may be applied before, during or after planting peanuts. Applications must be made prior to the emergence of the crop.

**SOYBEANS**

**Types of Applications:** Preplant, preemergence, at-planting, spot treatment, preharvest, selective equipment, hooded sprayers

**Preplant, Preemergence and At-planting**

**Use Instructions:** This product may be applied before, during or after planting soybeans. Applications must be made prior to the emergence of the crop.

The following tank mixtures may be applied before, during or after planting in conventional tillage

systems, into a cover crop, established sod or in previous crop residue.

CANOPY®  
COMMAND®  
DUAL MAGNUM  
FUSION®  
INTRRO®/ALACHLOR

LINEX®  
LOROX®/LINURON  
METRIBUZIN 75  
MICRO-TECH®  
PURSUIT®

PURSUIT® PLUS  
SCEPTER®  
SQUADRON®  
STEALTH®

For improved burndown, this product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

**Annual weeds:** For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 pints per acre in these tank mixtures. For other labeled annual weeds, apply 1 to 1.5 pints of this product per acre when weeds are less than 6 inches tall, and 2 to 3 pints when weeds are over 6 inches tall.

**Precautions, Restrictions:** The tank mixes listed in this section are not registered in California.

#### **Spot treatment**

**Use Instructions:** For spot treatments, apply this product prior to initial pod set in soybeans.

**Precautions, Restrictions:** Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

#### **Preharvest**

**Use Instructions:** This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the annual, perennial and woody brush tables. This product may be applied using either aerial or spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

Apply after pods have set and lost all green color. Allow a minimum of 7 days between application and harvest of soybeans. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

**Precautions, Restrictions:** Do not graze or harvest treated crop for livestock feed within 25 days of last preharvest application. DO NOT APPLY MORE THAN 6 QUARTS PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS. DO NOT APPLY MORE THAN 1 QUART PER ACRE OF THIS PRODUCT BY AIR. Do not apply to soybeans grown for seed as a reduction in germination or vigor may occur.

#### **Selective equipment**

**Use Instructions:** This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

**Precautions, Restrictions:** See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

## TREE FRUITS

**Labeled Crops:** Apple, Apricot, Cherry (Sweet, Sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (All), Quince

**Types of Applications:** General weed control, middles (between rows of trees), strips (in row of trees), selective equipment.

**NOTE:** FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO TREE FRUITS.

### Restrictions on application equipment

For cherries, any application equipment listed in this section may be used in all states.

For citron and olives, apply as post-directed spray only.

Any application equipment listed in this section may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no less than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees which have been planted in the orchard for 2 or more years. EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

**Precautions, Restrictions:** Allow a minimum of 1 day between last application and harvest for apple, crabapple, loquat, mayhaw, pear, quince.

Allow a minimum of 17 days between last application and harvest for apricot, cherry, nectarine, olive, peach, plum/prune.

## VEGETABLE CROPS

**Labeled Crops:** Amaranth, Arrugula, Artichoke (Jerusalem), Beans (All), Beet greens, Garden beets, Broccoli (All), Cabbage (Chinese), Cantaloupe, Cardoon, Cavalo Broccolo, Carrot, Cauliflower, Casaba melon, Celery, Celery (Chinese), Celeriac, Celtuce, Chard (Swiss), Chayote, Chervil, Chick peas, Chicory, Chrysanthemum, Collards, Corn salad, Crenshaw melon, Cress, Cucumber, Dandelion, Dock (sorrel), Eggplant, Endive, Fennel (Florence), Garlic, Gherkin, Ginseng, Gourds, Ground cherry, Guar, Honeydew melon, Honey ball melon, Horseradish, Kale, Kohlrabi, Leek, Lentils, Lettuce, Mango melon, Melons (All), Mizuna, Muskmelon, Mustard greens, Okra, Onion, Oriental radish, Parsley, Parsnips, Peas (All), Pepinos, Pepper (All), Persian Melon, Potato (Irish), Pumpkin, Purslane, Radish, Rape greens, Rhubarb, Rutabaga, Salsify, Shallot, Spinach, Squash (Summer, Winter), Sugar beets, Sweet potato, Tomatillo, Tomato, Turnip, Watercress, Watermelon, Yams.

**Use Instructions:** This product may be applied prior to the emergence of direct seeded vegetables or prior to transplanting vegetables.

**Precautions, Restrictions:** When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 0.5 inch natural rainfall or by applying water via sprinkler system.

For the following crops only, apply prior to planting. Allow at least 3 days between application and planting of cantaloupe, casaba melon, crenshaw melon, cucumber, eggplant, garlic, gherkin, gourds, ground cherry, honeydew melon, honey ball melon, mango melon, melons (all), muskmelon, pepper (all), persian melon, pumpkin, squash (summer, winter), tomatillo, tomato, watercress, and watermelon.

**Nonbearing Ginseng:** This product may be used for general weed control in established non-bearing ginseng. Direct applications so that there is no contact of this product with the ginseng plant. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, orchard guns or with wiper application equipment. Applications must be made at least one year prior to harvest. Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable plants. Contact of this product with other than matured brown bark can result in serious crop damage.

Wiper applicators may be used in rutabagas. Allow at least 14 days between application and harvest.

#### **VINE CROPS**

**Labeled Crops:** Grapes (raisin, table, wine), Kiwi fruit

**Types of Applications:** General weed control, middles (between rows), strips (in row), selective equipment.

**NOTE:** FOR GENERAL USE DIRECTIONS, SEE THE "TREE, NUT AND VINE (GENERAL)" SECTION. THE FOLLOWING DIRECTIONS ARE SPECIFIC TO VINE CROPS.

Applications should not be made when green shoots, canes or foliage are in the spray zone.

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make application with shielded sprayers or wiper equipment.

**Precautions, Restrictions:** Allow a minimum of 14 days between last application and harvest.

#### **ROUNDUP READY CROPS**

**NOTE:** USE OF THIS PRODUCT OVER "ROUNDUP READY" OR OTHER GLYPHOSATE TOLERANT CROPS MAY SUBJECT YOU TO THE RISK OF LOSS OF LICENSE RIGHTS TO PATENTED GLYPHOSATE TOLERANCE TECHNOLOGIES AND/OR LEGAL ACTION FOR INFRINGEMENT OF PATENTS TO THOSE GLYPHOSATE-TOLERANT TECHNOLOGIES. IF YOU ARE A LICENSED GROWER UNDER AN AGREEMENT WITH A GLYPHOSATE-TOLERANT SEED MANUFACTURER, PLEASE REFER TO YOUR LICENSE AGREEMENT TO DETERMINE WHETHER YOU MAY USE THIS PRODUCT WITHOUT RISK OF LOSING YOUR LICENSE OR OF LEGAL ACTION AGAINST YOU.

#### **ALFALFA WITH THE ROUNDUP READY GENE**

LOVELAND PRODUCTS, INC. RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene that provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Loveland representative. Roundup Ready crop varieties

must be purchased from an authorized licensed seed supplier.

See the "ROUNDUP READY CROPS" section of this label booklet for general precautionary instructions for use in Roundup Ready crops. Do NOT combine the instructions in this section of the label with other instructions for alfalfa varieties that do not contain a Roundup Ready gene listed in the "ALFALFA, CLOVER, AND OTHER FORAGE LEGUMES" and "PASTURES" sections of this label booklet.

## **FOR WEED CONTROL APPLICATIONS IN SEED PRODUCTION OF ROUNDUP READY ALFALFA**

### **Application Instructions**

This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa grown for seed. In-crop applications may be made from emergence through the late vegetative stage and spot treatments may be made from early bud stage through seed harvest.

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

### **For aerial application:**

Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. DO NOT EXCEED 64 FLUID OUNCES OR 2 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label booklet for procedures. To avoid spray drift that may cause injury to any vegetation not intended for treatment.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready alfalfa. Follow the cleaning procedures specified on the label of the product(s) used. Alfalfa can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

### **Types Of Applications: Preplant, At-planting, Preemergence, Postemergence and Post-harvest of seed**

#### Maximum Allowable Combined Application Rates

Combined total per year for all applications: 8.0 quarts per acre.

Preplant, At-planting and Preemergence applications: 64 fl oz or 2 quarts per acre.

Total in-crop application rate from emergence through the late vegetative stage: 6.0 quarts per acre.

Spot-treatment during early bud stage through seed harvest (See the "SPOT TREATMENT AND WIPER APPLICATION" section and the "PRECAUTIONS, RESTRICTIONS" under the "ALFALFA,

AND CLOVER section of this label for complete instructions) : Apply spray-to- wet; do not apply to the point of runoff.

There are no rotational crop restrictions following applications of this product. For any crop NOT listed in the label booklet, applications must be at least 30 days prior to planting.

**Over-the-top applications:** Broadcast applications of this product may be made using ground or aerial equipment in-crop to Roundup Ready alfalfa from emergence through the late vegetative stage. Do not make broadcast applications of this product between the initiation of alfalfa budding and the harvest of seed. Any single over-the-top broadcast application of this product should not exceed 64 fluid ounces or 2 quarts per acre. Sequential applications of this product should be at least 7 days apart.

Due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain a Roundup Ready gene and will not survive or thrive after the first application of this product. To limit undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, a single application of at least 32 fluid ounces or 1 quart per acre of this product should be applied at or before the 3 to 4 trifoliate growth stage.

**Spot Treatment after late vegetative stage:** For late emerging weeds, this product may be applied as a spot treatment in Roundup Ready alfalfa grown for seed during the early bud stage through seed harvest. Applications made during this stage may result in reduced seed yield and quality and are the responsibility of the grower. Make applications on a spray-to-wet basis. Do not spray to the point of runoff. If a spot treatment is made after the late vegetative stage, harvested seed must not be used for alfalfa sprout production.

**Post-harvest applications:** Following harvest of Roundup Ready alfalfa seed, the stand may be managed for forage and hay production.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLE" in this label booklet. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some re-growth of weeds has occurred.

In addition to those weeds listed in the label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa seed production. Repeat applications may be necessary for complete control.

Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and are NOT recommended for over-the-top applications of this product.

**PRECAUTIONS AND RESTRICTIONS:** Do not make over-the-top broadcast applications of this product between the initiation of alfalfa budding and the harvest of Roundup Ready alfalfa seed. If a spot treatment of this product is made after the late vegetative stage, do not use harvested Roundup Ready alfalfa seed for alfalfa sprout production. Regardless of applications made, the use of harvested Roundup Ready alfalfa seed is not suitable, and is not recommended for production of alfalfa sprouts.

**FOR WEED CONTROL APPLICATIONS IN FORAGE AND HAY PRODUCTION OF ROUNDUP READY ALFALFA**

**Application Instructions:** This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa. Allow a minimum of 5 days between the last application and grazing, or, cutting and feeding of alfalfa forage and hay.

For ground applications with broadcast equipment, apply this product in 3 to 40 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial application:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre.

DO NOT EXCEED 64 FLUID OUNCES OR 2 QUARTS OF THIS PRODUCT PER ACRE WHEN MAKING APPLICATIONS BY AIR. FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATION IN THAT STATE. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

**See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the label booklet for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment.**  
**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready alfalfa. Follow the cleaning procedures specified on the label of the product(s) used. Alfalfa can be very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

Types of applications: Preplant, At-planting, Preemergence and Postemergence  
**MAXIMUM ALLOWABLE APPLICATION RATES**

Combined total per year for all applications, including preplant during year of establishment: 8.0 quarts per acre

Combined total per year for in-crop applications for newly established and established stands: 6.0 quarts per acre (192 fl oz per acre)

Preplant, At-planting and Preemergence single applications: 2 quarts per acre (64 fl oz per acre)

**New Stand Establishment (seeding year)**

Prior to First Cutting During New Stand Establishment:

From emergence up to 4 trifoliate leaves: 64 fl oz or 2 quarts per acre

From 5 trifoliate leaves up to 5 days before first cutting: 64 fl oz or 2 quarts per acre

After First Cutting in Newly Established Stands:

In-crop application, per cutting, up to 5 days before cutting: 64 fl oz or 2 quarts per acre

**Established Stands (non-seeding year)**

In-crop applications, per cutting up to 5 days before cutting: 64 fl oz or 2 quarts per acre

There are no rotational crop restrictions following applications of this product. For any crop NOT listed in the label booklet, applications must be made at least 30 days prior to planting.

**Over-the-top applications:** This product may be applied postemergence to Roundup Ready alfalfa.

fa from emergence until 5 days prior to cutting. Any single over-the-top application of this product should not exceed 64 fluid ounces per acre. Sequential applications of this production should be at least 7 days apart.

**Attention:** Where Roundup Ready alfalfa is grown with a companion or cover crop, or is over seeded with a second species, over-the-top applications of this product will eliminate the non-Roundup Ready species.

During stand establishment, due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, a single application of at least 32 fluid ounces or 1 quart per acre of this product should be applied at or before the 3 to 4 trifoliate growth stage.

In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, applications of this product should be made after weeds have emerged but before alfalfa growth or re-growth interferes with application spray coverage of the target weeds.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL WEEDS RATE TABLE" and the "PERENNIAL WEEDS RATE TABLE" in this label booklet. Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some re-growth of weeds has occurred.

In addition to those weeds listed in this label booklet, this product will suppress or control the parasitic weed, Dodder (*Cuscuta* spp.) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.

Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and are NOT recommended for over-the-top applications of this product.

**PRECAUTIONS AND RESTRICTIONS:** Any single over-the-top application of this product should not exceed 64 fluid ounces or 2 quarts per acre. Sequential applications of this production should be at least 7 days apart. The combined total per year for all in-crop applications in newly established and established stands must not exceed 6.0 quarts (192 fluid ounces) per acre. Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay.

#### **Soybeans with the Roundup Ready Gene**

USE OF THIS PRODUCT IS INTENDED FOR POSTEMERGENCE APPLICATION ONLY ON SOYBEAN VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

- Applying this product to soybean varieties which are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene, since severe injury or destruction will result.
- Roundup Ready varieties must be purchased from an authorized seed supplier. Crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" soybean seed saved from previous year's production and replanted.
- The Roundup Ready designation indicates that the soybean contains a patented gene which provides tolerance to Loveland Products, Inc.'s Glyphosate brand herbicides. Information on Roundup Ready soybeans may be obtained by your seed supplier.

**NOTE:** The use of this product for in-crop applications over Roundup Ready soybean is not registered in California.

### **Application Instructions**

This product may be applied postemergence to Roundup Ready soybeans from the cracking stage throughout flowering.

Allow a minimum of 14 days between applications and harvest of soybeans.

### **Maximum Allowable Yearly Rates**

**Preplant:** Maximum amount of this product which can be applied prior to crop emergence is 5 quarts/A.

**In-crop:** Maximum combined total of multiple in-crop applications from cracking throughout flowering is 3 quarts/A. The maximum rate for any single in-crop application is 2 quarts/A. The maximum combined total of this product which can be applied during flowering is 2 quarts/A.

**Preharvest:** Maximum amount of this product that can be applied after loss of green color in soybean pods until 14 days before harvest is 1 quart/A. The combined total of in-crop and preharvest SWAGGER applications may not exceed 3 quarts/A.

**Cropping Season:** Combined total per year for all applications may not exceed 8 quarts/A.

When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product.

There are no rotational crop restrictions following application of this product.

**For ground applications:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre as a broadcast spray. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use nozzles which provide a flat fan pattern. Check for even distribution of spray droplets.

**For aerial applications:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart of this product per acre. DO NOT APPLY DURING LOW LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. MAINTAIN APPROPRIATE BUFFER ZONES TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION.

AERIAL APPLICATIONS ON ROUNDUP READY SOYBEANS MAY BE MADE ONLY IN THE FOLLOWING STATES: ALABAMA, ARKANSAS, FLORIDA, GEORGIA, KANSAS, LOUISIANA, MISSISSIPPI, MISSOURI (BOOT-HEEL) ONLY, NORTH CAROLINA, OKLAHOMA, SOUTH CAROLINA, TENNESSEE AND TEXAS.

### **Annual Weed Rate Tables**

The following rates will provide control of labeled grasses and broadleaf weeds in conventional and no-till soybean production systems. Refer to the "ANNUAL WEEDS RATE TABLES ALPHABETICALLY BY SPECIES" on this label for application rates for specific annual weeds.

Loveland Products, Inc. will not warrant crop safety or weed control when Roundup Ready soybeans are treated with herbicides not specified on this label. Because of the potential for: 1) crop injury, 2) poor weed control from antagonism, and/or 3) rotational crop restrictions, herbicides not

specified on this label should not be used, whether applied preemergence or applied postemergence as a tank mixture with SWAGGER.

This product may be used up to 64 fluid ounces per acre in any single application for control of annual weeds, where heavy weed densities exist. The maximum combined total of this product which can be applied during flowering is 64 fluid ounces per acre.

**NOTE:** The following instructions are based on a clean start at planting by using a burn-down application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of 16-64 fluid ounces per acre of this product can be used to control existing weeds prior to crop emergence.

#### **Midwest/Mid-Atlantic**

**Narrow row or drilled soybeans:** A single in-crop application of this product will provide effective control of labeled weeds. For best results, an initial application of 32 fluid ounces per acre (fl oz/A) on 4-8" weeds is specified. Weeds will generally be 4-8" tall to 3-5 weeks after planting. If the initial application is delayed and weeds are 8-18" tall, use 48 fl oz/A for best results.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 16-32 fluid ounces per acre may be necessary to control late flushes of weeds. The combined total application in-crop must not exceed 64 fluid ounces per acre.

**Wide row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 32 fluid ounces per acre (fl oz/A) on 4-8" weeds is specified. Weeds will generally be 4-8" tall 3 to 5 weeks after planting. If new flushes of weeds occur, they can be controlled by sequential applications of this product.

#### **Initial Treatment**

**Weed Height  
(inches)**

8

18

**Rate**

**(fluid oz/A)**

32

48

#### **Sequential Application (if needed)\***

**Weed Height  
(inches)**

1-3

3-6

6-12

**Rate**

**(fluid oz/A)**

16

24

32

\*Combined total application in-crop not to exceed 96 fluid ounces per acre.

**Giant ragweed:** Apply 32 fl oz/A when the weed is 8-12" tall to avoid the need for sequential application.

**Groundcherry, ladysthumb, Pennsylvania smartweed and morningglory:** Apply 32 fl oz/A to weeds 3-6" tall.

Some weeds, such as black nightshade, wooly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

### **Southeast**

**Narrow row, drilled, or wide-row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. For best results, an initial application of 32 fluid ounces per acre on 3-6" weeds is specified. Weeds will generally be 3-6' tall 2 to 3 weeks after planting.

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
3-6	32
6-12	48

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this product at 16 to 32 fluid ounces per acre may be necessary to control late flushes of weeds.

### **Sequential Application (if needed)\***

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
2-3	16
3-6	24
6-12	32

\*Combined total application in-crop not to exceed 96 fluid ounces per acre.

**Florida pusley, hemp sesbania and spurred anoda:** Apply 32 fl oz/A to weeds 2-4" for the initial application. Apply 32 fl oz/A when these weeds are 3-6" tall if a sequential application is necessary.

**Morningglory, black nightshade, groundcherry, and Pennsylvania smartweed:** Apply 24 fl oz/A on 1-3" weeds, 32 fl oz/A on 3-6" weeds, or 48 fl oz/A on 6-12" weeds for the initial application.

Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcucumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

### **Delta/Mid-South**

**Narrow row, drilled, or wide row soybeans:** An in-crop application of this product will provide effective control of the initial stand of labeled weeds. A sequential application will be required to control new flushes of weeds. For best results, an initial application of 32 fluid ounces per acre on 2-4" weeds is specified. Weeds will generally be 2-4" tall 2 to 3 weeks after planting.

### **Initial Treatment**

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
2-4	32
5-12	48

### **Sequential Application\***

<b>Weed Height (inches)</b>	<b>Rate (fluid oz/A)</b>
2-3	16
3-6	24
6-12	32

\*Combined total application in-crop not to exceed 96 fluid ounces per acre.

**Hemp sesbania and spurred anoda:** Apply a sequential treatment of 32 fl oz/A at 3-6" tall weeds if necessary.

Some weeds, such as black nightshade, broadleaf signalgrass, Texas panicum, burcucumber, and sicklepod, with multiple germination times may require a sequential application of this product. Suppressed or stunted weeds may also require sequential applications. Sequential applications should be made after some regrowth has occurred. Use a minimum of 16 fluid ounces of this product per acre for sequential applications. The combined total of all in-crop postemergence treatments must not exceed 96 fluid ounces per acre.

### **Perennial Weeds Rate**

A 32 to 64 fluid ounces per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, maretail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed, and wirestem muhly.

For best results, allow perennial weed species to achieve at least 6" of growth before spraying with SWAGGER. For additional information on perennial weeds, see the "PERENNIAL WEEDS RATE TABLE ALPHABETICALLY BY SPECIES" on this label. For some perennial species, repeat applications may be required to eliminate crop competition throughout the growing season.

### **Cotton with the Roundup Ready Gene – In Crop Applications**

WARNING: LOVELAND PRODUCTS, INC. INTENDS THIS PRODUCT FOR USE ONLY OVER-THE-TOP OF OR DIRECTED ONTO IMPROVED COTTON VARIETIES THAT ARE DESIGNATED AS COTTON WITH THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS AND TREES, OTHER THAN CROPS WITH THE ROUNDUP READY GENE, SINCE SEVERE INJURY OR DESTRUCTION WILL RESULT.

ROUNDUP READY COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION "ROUNDUP READY", INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT. IT IS UNLAWFUL TO SELL OR PLANT SAVED SEED.

COTTON WITH THE ROUNDUP READY GENE MAY ONLY BE USED FOR PLANTING A COMMERCIAL CROP IN A SINGLE SEASON. SEED MAY NOT BE SAVED FOR REPLANTING AND SAVED SEED MAY NOT BE SUPPLIED TO OTHERS FOR REPLANTING. LOVELAND PRODUCTS, INC. DOES NOT WARRANT THE SAFETY OR PERFORMANCE OF THIS PRODUCT WHEN USED ON "BROWN BAG" OR FARMER-MADE SEED.

*To Contact*

### Application Instructions

This product will control many troublesome weeds with over-the-top, post-directed, hooded sprayer, or preharvest applications in Roundup Ready cotton.

### Maximum Allowable Yearly Rates

1. Combined total per year for all applications	8 quarts/A
2. Preplant, Preemergence applications	5 quarts/A
3. Total in-crop applications from cracking to layby	4 quarts/A
4. Maximum preharvest application rate	2 quarts/A

**For ground applications** with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial applications** apply this product in 3 to 15 gallons of water per acre.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or any other conditions which favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

There are no rotational crop restrictions following applications of this product.

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready cotton. Follow the cleaning procedures specified on the label of the product(s) previously used. Cotton is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

**In addition to uses listed on this label, the following applications can be made:**

**Over-the-top application:** This product may be applied by aerial or ground application equipment postemergence to Roundup Ready cotton from the ground cracking stage until the four leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the fourth leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss. Any single over-the-top broadcast application should not exceed 1 quart per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the four leaf (node) stage of development. Sequential over-the-top applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

**NOTE:** Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges. Apply a preplant burndown treatment of 16-48 fluid ounces per acre of this product.

**Post-directed or hooded applications:** This product may be applied using precision post-directed or hooded sprayers to Roundup Ready cotton through layby. Be especially careful to minimize contact of the spray with cotton leaves. At this stage, post-directed equipment should be used that directs the spray to the base of the cotton plants. Place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row. For best results, make

applications while weeds are small (less than 3 inches). Minimize spray drift onto the leaves of the cotton plants by maintaining low spray pressure (less than 30 PSI). Applications that contact the cotton leaves may result in boll loss, delayed maturity and/or yield loss. Any single post-directed application should not exceed 1 quart per acre of this product. No more than two applications should be made from the fifth leaf through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

**Salvage Treatment:** This treatment may be used after the four leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. One quart per acre may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL and PERENNIAL" Weed Rate Tables of this label. SWAGGER applied at 1 quart per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: yellow and purple nutsedge, rhizome johnsongrass, common bermudagrass, silverleaf nightshade, trumpet creeper, and redvine. Fall preharvest applications may be required for control of these perennial weeds.

Tank mixtures with other herbicides may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control.

**Preharvest applications:** This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20% boll crack. Allow a minimum of 7 days between application and harvest. For specific instructions refer to the "COTTON" section on this label.

**NOTE:** SWAGGER will not enhance the performance of harvest aids when applied to Roundup Ready cotton. DO NOT APPLY SWAGGER TO CROPS GROWN FOR SEED.

#### **APPLICATION TO ROUNDUP READY FLEX COTTON**

##### **PRE-PLANT, AT-PLANTING, PRE-EMERGENCE, POST-EMERGENCE, PRE-HARVEST**

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for SWAGGER herbicide for essential product performance information.

The use of the over-the-top applications described in this supplemental label on cotton varieties other than Roundup Ready Flex cotton will cause crop injury and reduced yields. Drift of this product from applications made to Roundup Ready Flex cotton onto adjacent fields of post 4-leaf (node) Roundup Ready cotton may cause extensive injury including boll loss, delayed maturity and/or yield loss.

**NOTE:** The instructions provided in this label are specific to, and should only be used with, varieties designated as Roundup Ready Flex cotton. DO NOT combine the instructions in this label with those in the "ROUNDUP READY COTTON" section of the SWAGGER herbicide label booklet, or with any other Roundup Ready cotton or Roundup Ready Flex cotton instructions on labeling for this or other glyphosate-containing product. See "ANNUAL MAXIMUM USE RATE" in the "GENERAL INFORMATION" section of the SWAGGER herbicide label booklet, for additional information.

**TYPES OF APPLICATIONS:** Pre-plant, At-Planting, Pre-emergence, Post-emergence, Pre-harvest.

#### **Maximum Allowable Combined Application Quantities Per Season**

Combined total per year for all applications	8.0 quarts per acre
Calculate the combined rate to be used for all preplant, in-crop and preharvest applications, to ensure that the total does not exceed the maximum allowed rate per acre per year shown above.	
Preplant, At-planting, Preemergence applications	5.0 quarts per acre
Total in-crop applications from ground cracking to 60 percent open bolls	6.0 quarts per acre
Maximum allowed from 60 percent bolls open to 7 days prior to harvest	2.0 quarts per acre

**PRECAUTIONS and RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of the label booklet provided with the product container for general precautionary instructions for use in Roundup Ready crops.

#### **Pre-plant, Pre-emergence, At-Planting**

**USE INSTRUCTIONS:** This product may be applied before, during or after planting Roundup Ready Flex cotton. Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges.

#### **Post-emergence**

**USE INSTRUCTIONS:** When applied in accordance with this label, SWAGGER herbicide will control labeled annual grasses and broadleaf weeds in Roundup Ready Flex cotton. To maximize yield potential spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with one or more applications of this product. In general apply, an initial application of 1.0 quart per acre on 1 to 3 inch tall annual grass and broadleaf weeds. This product may be applied by ground application equipment at rates up to 1.5 quarts per acre per application post-emergence to Roundup Ready Flex cotton. In addition to broadcast applications, post-directed equipment may be used to achieve weed coverage.

**NOTE:** For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTION" in the label booklet for SWAGGER herbicide.

**PRECAUTIONS, RESTRICTIONS:** The maximum rate for any single in-crop application of this product is 1.5 quart per acre made using ground application equipment. In-crop application rates above 1.0 quart per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis. Except for pre-harvest use, do not exceed a maximum rate of 1.0 quart per acre of this product when making applications by air. Between layby and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 2.0 quarts per acre. The maximum combined total of all applications made from crop emergence through 60 percent open bolls must not exceed 6.0 quarts per acre.

#### **Pre-harvest**

**USE INSTRUCTIONS:** This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready Flex cotton after 60 percent boll crack. Up to 2.0 quarts of this product may be applied using either aerial or ground spray equipment.

**NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex cotton.

**PRECAUTIONS, RESTRICTIONS:** Allow a minimum of 7 days between application and harvest of Roundup Ready Flex cotton. Do not apply this product as a preharvest application to cotton grown for seed, as a reduction in germination or vigor may occur.

### **Ground Broadcast Equipment**

Use the specified rates of SWAGGER herbicide in 5 to 20 gallons of spray solution per acre. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete and uniform coverage of the target. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. Check for even distribution of spray droplets.

### **Aerial Equipment**

Apply this product in 3 to 15 gallons of water per acre. Except for pre-harvest use do not exceed a maximum rate of 1.0 quart per acre of this product when making applications by air. Extreme care must be used when applying this product to prevent injury to desirable plants and crops which do not contain a Roundup Ready gene. Drift may cause damage to any vegetation contacted to which treatment is not intended including boll loss, delayed maturity and/or yield loss on Roundup Ready cotton exceeding the 4 leaf (node) stage of development.

**PRECAUTIONS, RESTRICTIONS:** See the "AERIAL EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of the SWAGGER herbicide label booklet for information on proper use and calibration of this equipment.

### **Sprayer Preparation**

Cotton is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use. It is important that the sprayer, including tank and hoses, and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready Flex cotton. Follow the cleaning procedures specified on the label of the product(s) previously used.

**ATTENTION:** USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY FLEX COTTON, HOWEVER, DUE TO THE SENSITIVITY OF COTTON FRUITING TO VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

Read the "CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY" in the label booklet for SWAGGER herbicide before using. For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

### **Seed Production of Canola with the Roundup Ready Gene**

THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT CANOLA IN PRODUCTION FIELDS OF CANOLA CONTAINING THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH WILL RESULT IF CANOLA VARIETIES WHICH DO NOT CONTAIN THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT.

ROUNDUP READY CANOLA VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, "ROUNDUP READY", INDICATES THE CANOLA VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT. IT IS UNLAWFUL TO SELL OR PLANT SAVED SEED.

CANOLA WITH THE ROUNDUP READY GENE MAY ONLY BE USED FOR PLANTING A COMMERCIAL CROP IN A SINGLE SEASON. SEED MAY NOT BE SAVED FOR REPLANTING AND SAVED SEED MAY NOT BE SUPPLIED TO OTHERS FOR REPLANTING. LOVELAND PRODUCTS, INC. DOES NOT WARRANT THE SAFETY OR PERFORMANCE OF THIS PRODUCT WHEN USED ON "BROWN BAG" OR FARMER-MADE SEED.

#### **Use**

This product will control non-glyphosate tolerant canola in seed production fields of canola containing the Roundup Ready gene. This product may be applied using ground spray equipment only. Apply 1 pint of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. A second application of 1 pint per acre may be applied, if needed to control non-glyphosate tolerant canola plants.

DO NOT EXCEED A MAXIMUM RATE OF 1 QUART OF THIS PRODUCT PER ACRE PER SEASON.

**Application timing** – This product can be applied to Roundup Ready canola from emergence to the pre-flower (early bolting) stage.

Treated canola may not be used for food or feed. Do not feed or graze treated canola. Do not process treated canola for food or feed.

### **PREPLANT, POSTEMERGENT AND/OR OVER-THE-TOP APPLICATIONS TO CANOLA WITH THE ROUNDUP READY GENE**

#### **General Information**

USE THIS PRODUCT ONLY ON CANOLA WHICH CONTAINS THE ROUNDUP READY GENE.

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

- Applying this product to canola which is not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene, since severe crop injury or destruction will result.
- The Roundup Ready designation indicates that canola contains a patented gene which provides tolerance to this herbicide. Information on Roundup Ready canola may be obtained from your seed supplier or Loveland Products, Inc. representative.

#### **Use**

This product will control many troublesome emerged weeds when applied preplant, preemergent and/or with over-the-top application in Roundup Ready canola. Allow a minimum of 60 days between last application and canola harvest.

#### **Maximum Allowable Combined Application Quantities Per Season**

- |   |            |
|---|------------|
| 1. Preplant and preemergence application              | 2 quarts/A |
| 2. Total in-crop application from emergence to 6-leaf | 1 quart/A  |

**For ground applications** with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial applications** apply this product in 3 to 15 gallons of water per acre.

DO NOT EXCEED A MAXIMUM RATE OF 16 OUNCES PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE. Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions which favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas in which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

**There are no rotational crop restrictions following applications of this product.**

**Sprayer Preparation:** It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready canola. Follow the cleaning procedures specified on the label of the product(s) previously used. Canola is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

**Preplant or Preemergent Applications:** This product may be applied by aerial or ground application equipment prior to planting or emergence of canola. The maximum combined application rate from all preplant and preemergent applications should not exceed 2 quarts per acre per season.

**NOTE:** In no-till and stale seedbed systems, always use a burndown treatment to control existing weeds before canola emerges. Apply a preplant burndown treatment of 16-32 fluid ounces per acre of this product.

**Over-the-top applications:** This product may be applied by aerial or ground application equipment postemergence to Roundup Ready canola from emergence through the six-leaf stage of development. To maximize yield potential spray canola early to eliminate competing weeds. Any single over-the-top broadcast application should not exceed 16 ounces per acre. No more than two over-the-top broadcast applications may be made from crop emergence through the six-leaf stage of development. Sequential over-the-top applications of this product must be at least 10 days apart.

**Weeds controlled:** For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL" Weed Rate Table of this label.

Tank mixtures with other herbicides, insecticides, or fungicides may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

For over-the-top uses on Roundup Ready crop varieties, crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

#### **Postemergence Applications to Corn with the Roundup Ready Gene**

USE THIS PRODUCT ONLY ON CORN SEED DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

- Applying this product to corn varieties which are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants which do not contain the Roundup Ready gene since severe injury or destruction will result.
- Roundup Ready varieties must be purchased from an authorized seed supplier. Crop safety and weed control performance are not warranted by Loveland Products, Inc. when this product is used in conjunction with "brown bag" or "bin run" corn seed saved from previous year's production and replanted.
- The Roundup Ready designation indicates that the corn contains a patented gene which provides tolerance to Loveland Products, Inc.'s Glyphosate brand herbicides. Information on Roundup Ready corn may be obtained from your seed supplier.

#### **Application Instructions**

This product may be applied postemergence to Roundup Ready corn during the period beginning at corn emergence and continuing through the 12-leaf stage or until corn height reaches 30 inches, whichever comes first. Single in-crop applications of this product are not to exceed 1 quart per acre. Sequential in-crop applications of this product should not exceed 2 quarts per acre per growing season. Total SWAGGER use should not exceed 8 quarts per acre per year.

Allow a minimum of 50 days between application of this product and harvest of corn forage and 7 days between application and harvest of corn grain. Allow a minimum of 14 days between in-crop applications of this product. THE USE OF ADDITIVES FOR IN-CROP APPLICATIONS TO ROUNDUP READY CORN IS PROHIBITED.

#### **Maximum Yearly Rates Allowed**

Preplant/Preemergence (Maximum)	5 quarts/A
Total in-crop applications from emergence to 12-leaf stage or 30 inches	2 quarts/A
<u>Maximum preharvest rate</u>	<u>1 quart/A</u>
Combined total per year for all applications	8 quarts/A

When applied as directed, this product controls annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product. Applications should be made to actively growing weeds before they reach the maximum size listed in the "ANNUAL" and "PERENNIAL" Weed Rate Tables on this label. Refer to the "MIXING" section of this label for proper use instructions.

There are no rotational crop restrictions following applications of this product.

**ATTENTION:** AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift, or splash onto other desirable vegetation since minute quantities of this product can cause severe damage or destruction to crop plants in non-target areas. The likelihood of plant injury occurring from drift of this product is greatest when winds are gusty or in excess of 5 miles per hour. Even under lesser wind velocities, avoid conditions which allow spray drift to occur such as combinations of pressure and nozzle type that will result in fine particles (mist) which are likely to drift. **AVOID APPLYING AT EXCESSIVE SPEED OR SPRAY PRESSURE.**

**For ground applications:** Use the specified rates of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. See "WEEDS CONTROLLED" section below for specific rates. Carefully select proper nozzles and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

**For aerial applications:** Use the specified rates of this product in 3 to 15 gallons of spray solution per acre. Do not exceed 1 quart per acre. See "WEEDS CONTROLLED" section below. **AVOID DRIFT – DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITIONS WHICH FAVOR DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.**

#### **Weeds controlled**

For specific rates of applications and instructions for control of various annual and perennial weeds, refer to the "ANNUAL" and "PERENNIAL" Weed Rate Tables on this label. SWAGGER at up to 1 quart per acre will burndown or suppress the growth of the following perennial weeds and reduce crop competition: nutsedge, rhizome johnsongrass, quackgrass, Canada thistle, wirestem muhly.

**Sequential Applications:** Some weeds with multiple germination times or suppressed (stunted) weeds may require a second application of this product. The second application should be made after some regrowth has occurred.

#### **Tank mixtures**

A tank mixture of SWAGGER plus Micro-Tech® may be used for postemergence and residual control of annual weeds in corn. This tank mixture may be made during the period beginning at corn emergence and continuing until corn height reaches 5 inches.

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

A SWAGGER tank mixture with atrazine, Rifle®, Clarity®, Permit®, 2,4-D may be used for postemergence control of additional annual weeds in corn. A SWAGGER tank mixture with atrazine may be made during the period beginning at corn emergence and continuing until corn height reaches 12 inches. A SWAGGER tank mixture with Rifle® or Clarity® at 0.125 to 0.25 lb per acre may be made during the period beginning at corn emergence and continuing until corn height reaches 30 inches. A SWAGGER tank mixture with Permit® may be made during the period beginning at corn emergence and continuing until corn is at the five leaf stage or corn height reaches 30 inches. A SWAGGER mixture with 2,4-D at 0.125 to 0.25 lb per acre may be made during the period beginning at corn emergence and continuing until corn is at the five leaf stage or corn height reaches 8 inches, whichever comes first.

Refer to the specific product label and observe all precautions, mixing and application instructions for all products used in tank mixtures.

## **FOR POSTEMERGENCE APPLICATIONS WITH DROP NOZZLES TO CORN UP TO 48" TALL WITH THE ROUNDUP READY GENE**

### **GENERAL INFORMATION**

USE OF THIS PRODUCT IS INTENDED FOR POSTEMERGENCE APPLICATION ONLY ON CORN HYBRIDS DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

- Applying this product to corn hybrids which are not designated as Roundup Ready will result in severe crop injury and yield loss.
- The Roundup Ready designation indicates that the corn contains a patented gene which provides tolerance to Loveland Products, Inc.'s Glyphosate brand herbicides. Information on Roundup Ready corn may be obtained from your seed supplier

### **APPLICATION INSTRUCTIONS**

The instructions provided in this section allow application to Roundup Ready corn using drop nozzles through 48 inches. The instructions printed in the "CORN WITH THE ROUNDUP READY GENE" section of the label booklet for SWAGGER along with those included in this section are all applications which can be made onto Roundup Ready corn during the complete cropping season. See the general "ROUNDUP READY CROPS" section of the SWAGGER label booklet for additional information.

When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more applications of this product.

There are no rotational crop restrictions following applications of this product.

### **POSTEMERGENCE WITH DROP NOZZLES**

USE INSTRUCTIONS: For Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first, this product may be applied over-the-top broadcast or with drop nozzles. When corn height is 24 to 30 inches (free standing), for optimum spray coverage and weed control drop nozzles are recommended. For corn heights 30 to 48 inches (free standing), apply this product only using ground application equipment with drop nozzles adjusted to avoid spraying into the whorls of the corn plants.

Single in-crop applications of this product should not exceed 32 fluid ounces per acre. The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 64 fluid ounces per acre.

### **PREPLANT, POSTEMERGENT AND/OR OVER-THE-TOP APPLICATIONS TO SUGAR BEETS WITH THE ROUNDUP READY GENE**

USE OF THIS PRODUCT IS INTENDED FOR POSTEMERGENCE APPLICATION ONLY ON SUGAR BEET VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the sugar beet contains a patented gene, which provides tolerance to this product. Information on Roundup Ready sugar beet may be obtained from your seed supplier or Loveland Products representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

See the "ROUNDUP READY CROPS" section of the SWAGGER label booklet for general precautionary instructions for use in Roundup Ready crops. Do NOT combine these instructions with other s made for crop varieties that do not contain a Roundup Ready gene listed in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" sections of the SWAGGER label booklet.

**TYPES OF APPLICATIONS:** Preplant, At-Planting, Preemergence, Postemergence (In-crop)  
**APPLICATION INSTRUCTIONS**

## MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all application	8.0 quarts/A
Preplant, Preemergence applications	5.0 quarts/A
Emergence to 8 leaf stage	2.5 quarts/A
Between 8 leaf stage and canopy closure	2.0 quarts/A

**GENERAL PRECAUTIONS, RESTRICTIONS:** See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Tank mixtures of this product with herbicides, insecticides or fungicides may result in crop injury or reduced weed control.

### Preplant, At-Planting, Preemergence

**USE INSTRUCTIONS:** This product may be applied before, during or after planting of Roundup Ready sugar beets.

**PRECAUTIONS, RESTRICTIONS:** Maximum quantity of this product that may be applied for all preplant, at-planting and preemergence applications combined is 5.0 quarts per acre per season.

### Postemergence (In-crop)

**USE INSTRUCTIONS:** This product may be applied over the top of Roundup Ready sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

**RESTRICTIONS:** Follow all general precautionary instructions for use in Roundup Ready crops.

- The combined total application from crop emergence through harvest must not exceed 4.5 quarts per acre.
- The maximum rate for any single application between emergence to the 8 leaf stage is 1.5 quarts per acre.
- The maximum rate for any single application between the 8 leaf stage and canopy closure is 1.0 quart per acre.
- Allow a minimum of 30 days between last application and sugar beet harvest.
- For any crop NOT listed in the "CROPS" section of this label booklet, applications must be at least 30 days prior to planting.

## ANNUAL WEEDS RATE TABLES ALPHABETICALLY BY SPECIES

Water carrier volumes of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications.

Apply to actively growing annual weeds.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment. For those rates less than 48 fluid ounces per acre, this product may be used up to 48 fluid ounces per acre where heavy weed densities exist.

Refer to this map for location of the regions listed in the annual weed tables below.

## ANNUAL WEEDS RATE TABLE, NORTH AND SOUTH REGIONS



WEED SPECIES	REGION	RATE (FLUID OUNCES PER ACRE)					
		12	16	24	32	40	48
		MAXIMUM HEIGHT/LENGTH					
Amoda, spurred		-	1"	2"	3"	5"	8"
Barley		-	18"	18"+	-	-	-
	West	12"	-	-	-	-	-
Barnyardgrass	South	-	3"	5"	7"	9"	12"
	North	-	-	6"	12"	-	-
	West	6"	-	-	-	-	-
Bassia, fivehook		-	6"	-	-	-	-
Bittercress		-	12"	20"	-	-	-
Bluegrass, annual		6"	10"	-	-	-	-
Bluegrass, bulbous	West	-	6"	-	-	-	-
Brome, downy <sup>2</sup>		6"	-	-	-	-	-
Brome, Japanese		-	6"	-	24"	-	-
Browntop panicum		-	6"	8"	12"	-	24"
Burcucumber		-	-	6"	12"	-	-
Buttercup		-	12"	20"	-	-	-
Carolina foxtail		-	20"	-	-	-	-
Carolina geranium		-	-	-	4"	-	9"
Carpetweed		-	-	6"	12"	-	-
Cheat		-	6"	20"	-	-	-
Chervil		-	20"	-	-	-	-
Chickweed		-	12"	18"	-	-	-
	West	-	6"	-	-	-	-
Cocklebur		-	12"	18"	24"	-	-
Copperleaf, hophornbeam		-	1"	2"	3"	4"	6"
Copperleaf, Virginia		-	1"	2"	3"	4"	6"
Corn		-	12"	20"	-	-	-
	West	-	6"	-	-	-	-
Corn speedwell		-	12"	-	-	-	-
Crabgrass		-	12"	18"	-	-	-
Cutleaf evening primrose		-	-	-	3"	-	6"
Dwarf dandelion		-	20"	-	-	-	-
	West	-	12"	-	-	-	-
Eastern mannagrass		-	8"	12"	-	-	-
Eclipta		-	4"	8"	12"	-	-

**Annual Weeds Rate Table, North and South Regions cont'd.:**

WEED  
SPECIES

## REGION

RATE  
(FLUID OUNCES PER ACRE)

		12	16	24	32	40	48
		MAXIMUM HEIGHT/LENGTH					
Fall panicum	South	-	4"	6"	8"	12"	24"
	North	-	6"	12"	18"	-	-
	West	-	12"	-	-	-	-
Falsedandelion		-	20"	-	-	-	-
Falseflax, smallseed		-	12"	-	-	-	-
Fiddleneck		-	-	-	6"	-	12"
Field pennycress		-	6"	12"	-	-	-
Filaree		-	-	-	-	-	12"
Fleabane, annual		-	6"	20"	-	-	-
Fleabane, hairy ( <i>Conyza bonariensis</i> )		-	6"	-	-	-	-
Fleabane, rough		-	3"	6"	12"	-	-
Florida pusley		-	-	-	12"	-	-
Foxtail	South	-	8"	12"	20"	-	-
	North	18"	18"+	-	-	-	-
	West	8 fl. oz. up to 12"					
Goatgrass, jointed		-	6"	-	-	-	-
Goosegrass		-	3"	5"	8"	-	18"
Grain sorghum (milo)		-	6"	12"	20"	-	-
Groundsel, common		-	6"	-	-	-	-
Hemp sesbania		-	-	2"	4'	6"	8"
Henbit		-	-	-	6"	-	20"
	West	-	6"	-	-	-	-
Horseweed/Marestail ( <i>Conyza canadensis</i> )	South	-	-	12"	30"	-	-
	North/West	-	6"	12"	18"	-	-
Itchgrass		-	6"	12"	18"	-	-
Jimsonweed		-	6"	-	12"	-	-
Johnsongrass,	South	-	-	18"	-	-	-
seedling	North/West	-	12"	18"	-	-	-
Junglerice		-	3"	5"	7"	9"	12"
Knotweed		-	3"	8"	12"	-	20"
Kochia <sup>1</sup>		-	3 to 6"	12"	-	-	-
Lambsquarters		-	6"	8"	12"	-	20"
Little barley		-	20"	-	-	-	-
London rocket		-	6"	-	-	-	-
Mayweed		-	-	2"	6"	12"	18"
Morningglory ( <i>L.pomoea</i> spp.)		-	-	2"	4"	-	6"
Mustard, blue		6"	-	-	-	-	-
Mustard, tansy		6"	12"	20"	-	-	-
Mustard, tumble		6"	-	-	-	-	-
Mustard, wild		6"	12"	18"	-	-	-
Nightshade, black		-	6"	12"	-	-	-
Oats		-	6"	20"	-	-	-
Pigweed		-	12"	18"	24"	-	-

Annual Weeds Rate Table, North and South Regions cont'd.:

WEED  
SPECIES

## REGION

RATE  
(FLUID OUNCES PER ACRE)

12

16

24

32

40

48

## MAXIMUM HEIGHT/LENGTH

Plains/Tickseed		-	5"	12"	18"	-	-
<u>Coreopsis</u>							
Prickly lettuce		-	6"	12"	20"	-	-
Purslane		-	-	-	6"	-	12"
Ragweed, common	South	-	4"	6"	8"	-	12"
	North	-	6"	12"	18"	-	-
Ragweed, giant		-	-	4"	6"	-	11"
Red rice		-	-	-	4"	-	-
Russian thistle		-	-	-	6"	-	-
Rye	South	-	6"	20"	60"	-	-
	North	-	18"	18"+	-	-	-
	West	12"	-	-	-	-	-
Ryegrass		-	-	-	6"	-	7"+
Ryegrass, Italian	West	-	6"	-	-	-	-
Sandbur, field		12"	-	-	-	-	-
Shattercane		-	12"	18"	-	-	-
	West	12"	-	-	-	-	-
Sheperdspurse		-	6"	12"	-	-	-
Sicklepod		-	-	2"	4"	-	8"
Signalgrass, broadleaf		-	3"	5"	7"	9"	12"
Smartweed, ladythumb		-	4"	6"	8"	-	12"
Smartweed, Pennsylvania		-	4"	6"	8"	-	12"
Sowthistle, annual	North/South	-	-	-	6"	-	12"
	West	-	6"	-	-	-	-
Spanishneedles		-	-	-	8"	-	18"
Speedwell, purslane		-	12"	-	-	-	-
Sprangletop		-	6"	12"	20"	-	-
Spurge, Annual	West	-	6"	-	-	-	-
Spurge, prostrate		-	6"	12"	20"	-	-
Spurge, spotted		-	6"	12"	20"	-	-
Spurry, umbrella		6"	-	-	-	-	-
Stinkgrass		12"	-	-	-	-	-
Sunflower		-	12"	18"	-	-	-
Teasweed/Prickly sida		-	1"	2"	3"	4"	6"
Texas panicum		-	6"	8"	12"	-	24"
	West	-	12"	-	-	-	-
Velvetleaf	South	-	2"	3"	4"	5"	8"
	North	-	3"	6"	12"	-	-
Virginia pepperweed		-	18"	-	-	-	-
Waterhemp		-	-	6"	12"	-	-
Wheat	South	-	6"	30"	-	-	-
	North/West	-	18"	18"+	-	-	-
Wheat (overwintered)		-	6"	18"	-	-	-
Wild oats		-	12"	-	-	-	-
Witchgrass		-	12"	-	-	-	-
Wooly cupgrass		-	6"	12"	-	-	-
Yellowrocket		-	-	12"	20"	-	-

Weeds without a specific region include all regions.

<sup>1</sup>Do not treat kochia in the button stage

<sup>2</sup>For control of Downy brome in no-till systems, use 16 fluid ounces per acre.

#### **Annual Weeds – Water Carrier Volumes of 10 to 40 Gallons Per Acre**

Apply 1 to 1.5 quarts of this product per acre. Use 1 quart per acre if weeds are less than 6 inches tall and 1.5 quarts per acre if weeds are over 6 inches tall.

These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications.

#### **Annual Weeds – Tank Mixtures with 2,4-D or Rifle**

This product may be tank mixed with the products listed providing the product tank-mixed is registered for use on this site.

12 to 16 fluid ounces of this product plus 0.25 pounds a.i. of Rifle or 0.5 pounds a.i. of 2,4-D per acre will control the following weeds with the maximum height or length indicated: 6" – prickly lettuce, mare's tail/horseweed (*Conyza canadensis*), morning glory (*Ipomoea* spp.), kochia (Rifle only); 12" – cocklebur, lambsquarters, pigweed, Russian thistle.

16 fluid ounces of this product plus 0.5 pounds a.i. of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.

12 fluid ounces of this product plus 0.25 pounds a.i. of Rifle or 0.5 pounds a.i. of 2,4-D per acre will control foxtail up to 18".

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Rifle is applied within 45 days of planting.

**DO NOT APPLY RIFLE OR 2,4-D TANK MIXTURES BY AIR IN CALIFORNIA.**

#### **PERENNIAL WEEDS RATE TABLE ALPHABETICALLY BY SPECIES**

Apply to actively growing perennial weeds.

**NOTE:** If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

For hand-held sprayers, prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

**Spray Solution  
Desired**

**Amount of SWAGGER**

Volume	1/2%	1%	1 1/2%	2%	5%	10%
1 Gal	2/3 oz	1 1/3 oz	2oz	2 2/3 oz	6 1/2 oz	13 oz
25 Gal	1 pt	1 qt	1 1/2 qt	2 qt	5 qt	10 qt
100 Gal	2 qt	1 gal	1 1/2 gal	2 gal	5 gal	10 gal

2 tablespoons = 1 fluid ounce

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
Alfalfa	1	3-10	2%	Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to retreatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	4	3-20	1.5%	Partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.
Anise (fennel)	-	-	1-2%	Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Bahiagrass	3-5	3-20	2%	Apply when most plants have reached the early head stage.
Bentgrass	1.5	10-20	2%	For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bent grass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.
Bermudagrass	3-5	3-20	2%	For control apply 5 quarts of this product per acre. For partial control, apply 3 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.
Bermudagrass, water (knotgrass)	1-1.5	5-10	2%	Apply 1.5 quarts of this product in 5 to 10 gallons of water per acre. Apply when water bermuda grass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field. Fall applications only: Apply 1 quart of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water bermudagrass that is 12 to 18 inches in length. This product is not registered in California for use on water bermudagrass.
Bindweed, field	0.5-5	3-20	2%	Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth. For control, apply 4 to 5 quarts of this product per acre west of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a
Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments

killing frost. Also for control, apply 2 quarts of this product plus 0.5 pounds a.i. of Rifle in 10 to 20 gallons of water per acre. Do not apply by air. For suppression on irrigated agricultural land, apply 1 to 2 quarts of this product plus 1 pound a.i. of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only.

Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 1 to 5 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky	1-2	3-40	2%	Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.
Blueweed, Texas	3-5	3-40	2%	Apply 4 to 5 quarts of this product per acre west of the Mississippi River and 3 to 4 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.
Brackenfern	3-4	3-40	1-1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1-2	3-40	2%	Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
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Bursage, woolly-leaf	-	3-20	2%	For control, apply 2 quarts of this product plus 1 pint of Rifle per acre. For partial control, apply 1 quart of this product plus 1 pint of Rifle per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond <u>flowering</u> .
Canarygrass, reed	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	3-5	3-40	2%	Apply when most plants have reached the early <u>head stage</u> .
Clover; red, white	3-5	3-20	2%	Apply when most plants have reached the early <u>bud stage</u> .
Cogongrass	3-5	10-40	2%	Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat <u>treatments may be necessary to maintain control</u> .
Dallisgrass	3-5	3-20	2%	Apply when most plants have reached the early <u>head stage</u> .
Dandelion	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dock, curly	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre.
Dogbane, hemp	4	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum <u>emergence of dogbane has occurred</u> .
Fescue	3-5	3-20	2%	Apply when most plants have reached the (except tall) early head stage.
Fescue, tall	1-3	3-40	2%	Apply 3 quarts of this product per acre when most plants have reached boot-to-early seedhead stage of development. Fall applications only: Apply 1 quart of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 1 pint per acre of this product will improve long-term control and control seedlings germinating <u>after fall treatments or the following spring</u> .
Guineagrass	3	3-40	1%	Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage <u>when using hand-held equipment</u> .
Horsenettle	3-5	3-20	2%	Apply when most plants have reached the early <u>bud stage</u> .
Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments

Horseradish	4	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, <u>apply in late summer or fall.</u>
Iceplant	-	-	1.5-2%	Iceplant should be at or beyond the early stage of bud growth. Thorough coverage is necessary for <u>best control.</u>
Jerusalem artichoke	3-5	3-20	2%	Apply when most plants are in the early bud stage.
Johnsongrass	0.5-3	3-40	2%	In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using the 1 quart per acre rate. For burndown of Johnsongrass, apply 1 pint of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage. Spot treatment (partial control or suppression) – Apply a 1 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and <u>complete.</u>
Kikuyugrass	2-3	3-40	2%	Spray when most Kikuyugrass is at least 8 inches in height (3 or 4-leaf stage of growth). Allow 3 or more days after application before tillage.
Knapweed	4	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth. For best results, <u>apply in late summer or fall.</u>
Lantana	-	-	1.1.25%	Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.
Lespedeza	3-5	3-20	2%	Apply when most plants have reached the early bud stage.
Milkweed, common	3	3-40	2%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1-2	3-40	2%	Use 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre of in pasture, sod, or non crop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow <u>3 or more days after application before tillage.</u>
Mullein, common	3-5	3-20	2%	Apply when most plants are in the early bud stage.
<b>Weed Species</b>	<b>Rate (QT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Comments</b>

Napiergrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Nightshade, silver leaf	2	3-10	2%	Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.
Nutsedge; purple, yellow	0.5-3	3-40	1-2%	Apply 3 quarts of this product per acre or apply a 1 to 2 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers. Sequential applications: 1 to 2 quarts of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3 to 5-leaf stage. Subsequent applications will be necessary for long-term control. For partial control of existing plants, apply 1 pint to 2 quarts of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.
Orchardgrass	1-2	3-40	2%	Apply 2 quarts of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Orchardgrass sods going to no-till corn: Apply 1 to 1.5 quarts of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.
Pampasgrass	-	-	1.5-2%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Phragmites	3-5	10-40	1-2%	For partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat
Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments

Poison hemlock	-	-	1-2%	treatments may be necessary to maintain control. Visual control symptoms will be slow to develop. Apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Quackgrass	1-3	3-40	2%	In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 1 quart of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 2 quarts of this product. Do not tank mix with residual herbicides when using the 1 quart rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results. In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.
Redvine	0.75-2	5-10	2%	For suppression, apply 24 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 2 quarts per acre. Apply specified rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Reed, giant	-	-	2%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	1-3	3-40	2%	In annual cropping systems apply 1 to 2 quarts of this product per acre. Apply 1 quart of this product in 3 to 10 gallons of water per acre. Use 2 quarts of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 2 to 3 quarts of this product in 10 to 40 gallons of water per acre. For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using the 1 quart per acre rate.
Smartweed, swamp	3-5	3-40	2%	Apply when most plants have reached the early bud stage of growth. Also for control, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.
Spurge, leafy	-	3-10	2%	For suppression, apply 16 fluid ounces of this product plus 0.5 pound a.i. 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Rate	Water	Hand-Held		
Weed Species	(QT/A)	Volume	% Solution	Comments

Starthistle, yellow	2	10-40	2%	Best results are obtained when applications are made during the rosette, bolting and early flower stages.
Sweet potato, wild	-	-	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, artichoke	-	-	2%	Partial control. Apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.
Thistle, Canada	2-3	3-40	2%	Apply when most plants are at or beyond the bud stages of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage. For suppression, apply 1 quart of this product or 1 pint of this product plus 0.5 pound a.i. 2,4-D, in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.
Timothy	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	4-5	3-40	2%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.
Trumpet creeper	2	5-10	2%	Partial control. Apply in late September or October, to plants which are at least 18 inches tall and have been growing 45-60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Vaseygrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Velvetgrass	3-5	3-20	2%	Apply when most plants are in the early head stage.
Wheatgrass, western	2-3	3-40	2%	For best results, apply when most plants have reached the boot-to-head stage of growth.

#### WOODY BRUSH AND TREES RATE TABLE ALPHABETICALLY BY SPECIES

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at a high moisture content and are flowering.

Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may

be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
Alder	3-4	3-40	1-1.5%	For control
Ash	2-5	3-40	1-2%	Partial control
Aspen, quaking	2-3	3-40	1-1.5%	For control
Bearmat (Bearclover)	2-5	3-40	1-2%	Partial control
Beech	2-5	3-40	1-2%	Partial control
Birch	2	3-40	1%	For control
Blackberry	3-4	10-40	1-1.5%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a ¾ percent solution of this product. For control of blackberries after leaf drop and until a killing frost or as long as stems are green, apply 3 to 4 quarts of this product in 10 to 40 gallons of water per acre.
Blackgum	2-5	3-40	1-2%	For control
Bracken	2-5	3-40	1-2%	For control
Broom; French, Scotch	-	-	1.5-2%	For control
Buckwheat, California	-	-	1-2%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	2-5	3-40	1-2%	Partial control
Catsclaw	-	-	1-1.5%	Partial control
Ceanothus	2-5	3-40	1-2%	Partial control
Chamise	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black pin	2-3	3-40	1-1.5%	For control
Coyote brush	-	-	1.5-2%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Dogwood	2-5	3-40	1-2%	Partial control
Elderberry	2	3-40	1%	For control
Elm	2-5	3-40	1-2%	Partial control
Eucalyptus	-	-	2%	For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian Peppertree)	2-5	3-40	1-2%	Partial control
Gorse	2-5	3-40	1-2%	Partial control
Hasardia	-	-	1-2%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	2-3	3-40	1-1.5%	For control
Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments

Hazel	2	3-40	1%	For control
Hickory	2-5	3-40	1-2%	Partial control
Honeysuckle	3-4	3-40	1-1.5%	For control
Hornbeam, American	2-5	3-40	1-2%	Partial control
Kudzu	4	3-40	2%	For control. Repeat applications may be required to maintain control.
Locust, black	2-4	3-40	1-2%	Partial control
Madrone	-	-	2%	Partial control. Apply to resprouts that are 3 resprouts to 6 feet tall. Best results are obtained with spring/early summer treatments.
Manzanita	2-5	3-40	1-2%	Partial control
Maple, red	2-4	3-40	1-1.5%	For control, apply a 1 to 1.5 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 2 to 4 quarts of this product per acre.
Maple, sugar	-	-	1-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Monkey flower	-	-	1-2%	Partial control. Thorough coverage of foliage is necessary for best results.
Oak; black, white	2-4	3-40	1-2%	Partial control
Oak, post	3-4	3-40	1-1.5%	For control
Oak; northern, pin	-	-	1-1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Oak; southern, red	2-3	3-40	1-1.5%	For control
Persimmon	2-5	3-40	1-2%	Partial control
Pine	2-5	3-40	1-2%	For control
Poison Ivy/ Poison oak	4-5	3-40	2%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	2-5	3-40	2%	Partial control
Redbud, eastern	2-5	3-40	1-2%	For control
Rose, multiflora	2	3-40	1%	For control. Treatments should be made prior to leaf deterioration by leaf-eating insects.
Russian olive	2-5	3-40	1-2%	Partial control
Sage, black	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	2-5	3-40	1-2%	Partial control
Sage brush, California	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	2	3-40	1%	For control
Salt-cedar	2-5	3-40	1-2%	For control
Sassafras	2-5	3-40	1-2%	Partial control
Sourwood	2-5	3-40	1-2%	Partial control
Sumac; poison, smooth, winged	2-4	3-40	1-2%	Partial control
Sweetgum	2-3	3-40	1-1.5%	For control
Swordfern	2-5	3-40	1-2%	Partial control
Tallowtree, Chinese	-	-	1%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak	-	-	2%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.

Weed Species	Rate (QT/A)	Water Volume	Hand-Held % Solution	Comments
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Thimbleberry	2	3-40	1%	For control
Tobacco tree	-	-	1-2%	Partial control
Trumpet creeper	2-3	3-40	1-1.5%	For control
Vine maple	2-5	3-40	1-2%	Partial control
Virginia creeper	2-5	3-40	1-2%	For control
Waxmyrtle,	2-5	3-40	1-2%	Partial control
southern				
Willow	3	3-40	1%	For control

### STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** Store above 10°F (-12°C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68°F (20°C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleansed, reconditioned, or destroyed.

**CONTAINER DISPOSAL Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org).

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Storage & Disposal cont'd.:**

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Container Disposal: Nonrefillable container.** Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. Box 1286, GREELEY, CO 80632.

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UCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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P.O. BOX 1286, GREELEY, COLORADO 80632-1286



Performance

Quality

Value

November 25, 2009

Eugene Wilson  
Document Processing Desk (7504P)  
U.S. Environmental Protection Agency  
Room S4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Subject: SWAGGER - EPA Reg. No. 34704-RNGG

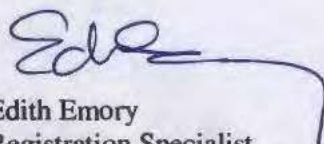
Dear Mr. Wilson:

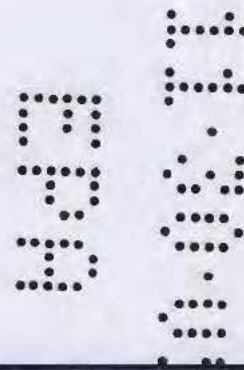
Please find the enclosed documents in support of our proposed registration of Swagger, EPA File No. 34704-RNGG.

1. Form 8570-1 Application, indicating the re-submission of the label and outlining reasons for the change.
2. Four copies of the newly revised label.
3. A document describing the changes entitled "Swagger Revisions".
4. A highlighted copy of the previously submitted label (from 11/23/09), highlighting where changes have been made.
5. A spreadsheet showing each crop listed on the proposed sources of glyphosate, as well as on the proposed sources of IBA and kinetin.  
(Please note that where the representative commodities for each crop were properly shown on the IBA and Kinetin source label, we have included the crop group on the proposed Swagger label. Otherwise, a large number of proposed uses have been stricken from the Swagger label.)

Please contact me at 970-534-3402 or by e-mail: [edith.emory@cpsagu.com](mailto:edith.emory@cpsagu.com) if there are any questions or comments concerning this submission.

Sincerely,

  
Edith Emory  
Registration Specialist  
Enclosures





---

Performance

Quality

Value

---

November 20, 2009

Eugene Wilson  
Document Processing Desk (7504P)  
U.S. Environmental Protection Agency  
Room S4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Subject: SWAGGER - EPA Reg. No. 34704-RNGG

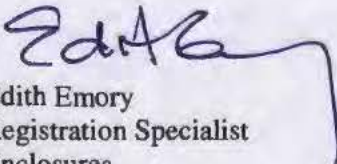
Dear Mr. Wilson:

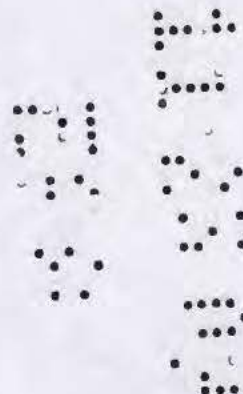
Loveland Products, Inc. is respectfully submitting the enclosed information in support of the subject registration. These documents are in response to your letter dated October 27, 2009.

1. Revised form 8570-36 Summary of the Physical/Chemical Properties.
2. Two copies of the label with the revisions to first page as requested, as well as re-formatted as required in the EPA Label Review Manual, 3<sup>rd</sup> Edition, August, 2003.
3. Revised form 8570-4 (with attachment), eliminating several proposed sources of technical product whose uses do not support the proposed label uses of our product.
4. A chart showing the proposed uses from the submitted label, as well as the approved uses for each of the sources of technical product we are proposing.

Please contact me at 970-534-3402 or by e-mail: [edith.emory@cpsagu.com](mailto:edith.emory@cpsagu.com) if there are any questions or comments concerning this submission.

Sincerely,

  
Edith Emory  
Registration Specialist  
Enclosures





United States  
Environmental Protection Agency  
Washington, DC 20460

☒ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 34704-RNGG	2. EPA Product Manager PM#	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) SWAGGER		
5. Name and Address of Applicant (Include ZIP Code) Loveland Products, Inc. P.O. Box 1286 Greeley, Colorado 80632-1286 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input checked="" type="checkbox"/> Resubmission in response to Agency letter dated <u>10/27/09</u> .	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input checked="" type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

This label resubmission is in response to Jim Tompkins' letter dated 10/27/09 and subsequent emails and communications with Mr. Eugene Wilson. Multiple label changes to the label were required to ensure that all proposed uses were supported by both sources of active ingredient listed on Confidential Statement of Formula. Changes were also required to comply with Label Review Manual directions for toxicity categories as dictated by lab study results for oral toxicity. Additional editing-type changes required by Mr. Wilson's prior review of first 13 pages of label revision submitted 11/23/09 are reflected in this version. Please see attached document "Swagger Revisions" for specific changes.

## Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
				<input type="checkbox"/> Plastic	
				<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input type="checkbox"/> Other (Specify) _____	
* Certification must be submitted					
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1, 2.5, 15, 30, 55, 110, 275 Gal, Bulk		5. Location of Label Directions <input checked="" type="checkbox"/> Attached to container	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input checked="" type="checkbox"/> Other		self adhesive	

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Edith Emory	Title Registration Specialist	Telephone No. (Include Area Code) 970-534-3402	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped) 	
2. Signature 	3. Title Registration Specialist		
4. Typed Name Edith Emory edith.emory@cpsagu.com	5. Date November 25, 2009		

154



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**401 M Street, S.W.**  
**WASHINGTON, D.C. 20460**

**Paperwork Reduction Act Notice:** The public reporting burden for this collection of information is estimated to average 1 hour per response for registration activities and 1 hour per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the completed form to this address.

**SUMMARY OF THE PHYSICAL/CHEMICAL PROPERTIES (PR Notice 98-1)**

<b>1. PRODUCT NAME:</b> SWAGGER		<b>2. Reg. No.</b> 34704-RNGG
<b>3. COMPANY NAME:</b> Loveland Products, Inc.		<b>4. SUBMISSION DATE:</b> November 19, 2009
<b>5. FIRST SUBMISSION</b> <input checked="" type="checkbox"/> <b>6. RESUBMISSION</b> <input type="checkbox"/>	<b>7. PESTICIDE TYPE:</b> Herbicide	<b>10. REGISTRATION</b> <input checked="" type="checkbox"/>
<b>8. FORMULATED MANUFACTURING-USE PRODUCT</b> <input type="checkbox"/> or <b>9. END-USE PRODUCT</b> <input checked="" type="checkbox"/>		<b>11. REREGISTRATION</b> <input type="checkbox"/>
<b>13. PRODUCT MANAGER OR CHEMICAL REVIEW MANAGER #/NAME (IF KNOWN):</b>		<b>12. REREG CASE #</b>
<b>14. GUIDELINE REFERENCE NO.(GRN)/TITLE</b>	<b>15. VALUE or QUALITATIVE DESCRIPTION/METHOD(s) USED WHERE APPLICABLE AND REFERENCES</b>	<b>16. MRID or REPORT NO.</b>

**Group B, Series 830-Physical and Chemical Properties (40 CFR 158.190)**

-6302	Color	Amber	26105
-6303	Physical State	liquid	26105
-6304	Odor	Amine like	26105
-6314	Oxidation/Reduction: Chemical Incompatibility	✓ Not an oxidizing nor reducing chemical	
-6315	Flammability/Flame Extension	>100°C	26105
-6316	Explosibility	✓ Not considered to be explosive	
-6317	Storage Stability	✓ Study in progress	
-6319	Miscibility	✓ This product is not to be diluted with petroleum solvents	
-6320	Corrosion Characteristics	✓ Study in progress	
-6321	Dielectric Breakdown Voltage	Not Applicable	
-7000	pH	4.30 - 1% w/v solution	26105
-7100	Viscosity	51.365 cSt @ 20°C	26105
-7300	Density/Relative Density/ Bulk Density	1.173 g/ml	26105

*Revised. Accepted: 11-25-09*  
*E. W. 155*



United States  
Environmental Protection Agency  
Washington, DC 20460  
**Formulator's Exemption Statement**  
(40 CFR 152.85)

**Applicant's Name and Address**

Loveland Products, Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286

**EPA File Symbol/Registration Number**

34704-

**Product Name**

SWAGGER

**Date of Confidential Statement of Formula (EPA Form 8570-4)**

June 11, 2009

As an authorized representative of the applicant for registration of the product identified above, I certify that:

**(1) This product contains the following active ingredient(s):**

Glyphosate CAS# 38641-94-0  
Indolebutyric Acid CAS # 133-32-3  
Kinetin CAS # 525-79-1

**(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another producer, and is labeled for at least each use for which my product is proposed to be labeled.**

**(3) Indicate by checking (A) or (B) below which paragraph applies:**


☒ (A) An accurate Confidential Statement of Formula (EPA FORM 8570-4) for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

**OR**

☐ (B) The Confidential Statement of Formula (CSF) (EPA Form 8570-4) referenced above and on file with the EPA is complete, current, and accurate and contains the information required on the current CSF.

**(4) The following active ingredients in this product qualify for the formulator's exemption.**

**Source**

Active Ingredient	Product Name	Registration Number
Glyphosate		
Indolebutyric Acid		
Kinetin	RADIATE	34704-909
	See attached page for additional glyphosate sources	
Signature 	Name and Title Scott Baker - Registration Manager	Date June 9, 2009

\*Product ingredient source information may be entitled to confidential treatment\*



United States  
Environmental Protection Agency  
Washington, DC 20460

☒ Registration  
☐ Amendment  
☐ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number 34704- <i>RN4G</i>	2. EPA Product Manager  PM#	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) SWAGGER		
5. Name and Address of Applicant (Include ZIP Code) Loveland Products, Inc. P.O. Box 1286 Greeley, Colorado 80632-1286 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input checked="" type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

This application is to support a new end use registration.

## Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
				<input type="checkbox"/> Plastic	
				<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
* Certification must be submitted				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container 1, 2.5, 15, 30, 55, 110, 275 Gal, Bulk	5. Location of Label Directions <input checked="" type="checkbox"/> Attached to container			
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input checked="" type="checkbox"/> Other self adhesive			

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Scott Baker	Title Registration Manager	Telephone No. (Include Area Code) 970-534-3403
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		Date Application Received (Stamped) 
2. Signature 	3. Title Registration Manager	
4. Typed Name Scott Baker scott.baker@cpsagu.com	5. Date June 11, 2009	



June 11, 2009

Document Processing Desk (7504P)  
U.S. Environmental Protection Agency  
Room S4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Subject: SWAGGER - EPA Reg. No. 34704-

Loveland Products, Inc., is respectfully submitting the enclosed information in support of the subject registration. The test product was submitted to labs under product identification LPI 6285-11, which we are now naming SWAGGER. Please find the following enclosed:

1. EPA Form 8570-1 Application for Pesticide
2. EPA Form 8570-34 Data Citation
3. EPA Form 8570-35 Data Matrix
4. EPA Form 8570-27 Formulator's Exemption Statement
5. EPA Form 8570-36 Summary of Physical/Chemical Properties
6. EPA Form 8570-37 Self-Certification Statement for the Physical/Chemical Properties (PR Notice 98-1)
7. EPA Form 8570-4 Confidential Statement of Formula
8. Toxicity Study Index (3 complete sets of items 8 - 18)
9. Toxicity Studies Summaries
- 47776501 10. PRIMARY EYE IRRITATION - 870.2400 Study No. 26109
- 47776502 11. PRIMARY DERMAL IRRITATION - 870.2500 Study No. 26110
- 47776503 12. ACUTE ORAL TEST - 870.1100 Study No. 26106
- 47776504 13. ACUTE DERMAL TEST - 870.1200 Study No. 26107
- 47776505 14. DERMAL SENSITIZATION - 870.2600 Study No. 26111
- 47776506 15. ACUTE INHALATION - 870.1300 Study No. 26108
- 47776507 16. Product Chemistry Study Index
- 47776508 17. Physical and Chemical Characteristics; Color, Physical State, Odor, pH, Viscosity, and Density/Relative Density Study No. 26105
18. Product Chemistry Data for SWAGGER Study No. 09-6285-11-1
  - a. Physical and Chemical Characteristics
19. Product label: SWAGGER (5 copies)

Please contact me at 970-534-3403 or by e-mail: [scott.baker@cpsagu.com](mailto:scott.baker@cpsagu.com) if there are any questions or comments concerning this submission.

Sincerely,

Scott Baker  
Registration Manager  
Enclosures



Performance

Quality

Value

June 11, 2009

Document Processing Desk (7504P)  
U.S. Environmental Protection Agency  
Room S4900, One Potomac Yard  
2777 S. Crystal Drive  
Arlington, VA 22202

Subject: SWAGGER - EPA Reg. No. 34704-

Loveland Products, Inc., is respectfully submitting the enclosed information in support of the subject registration. The test product was submitted to labs under product identification LPI 6285-11, which we are now naming SWAGGER. Please find the following enclosed:

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13. ACUTE DERMAL TEST - 870.1200 Study No. 26107
14. DERMAL SENSITIZATION - 870.2600 Study No. 26111
15. ACUTE INHALATION - 870.1300 Study No. 26108
16. Product Chemistry Study Index
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  - a. Physical and Chemical Characteristics
19. Product label: SWAGGER (5 copies)

Please contact me at 970-534-3403 or by e-mail: [scott.baker@cpsagu.com](mailto:scott.baker@cpsagu.com) if there are any questions or comments concerning this submission.

Sincerely,

Scott Baker  
Registration Manager  
Enclosures





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**401 M Street, S.W.**  
**WASHINGTON, D.C. 20460**

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**Certification with Respect to Citation of Data**

Applicant's/Registrant's Name, Address, and Telephone Number Loveland Products, Inc. PO Box 1286, Greeley, CO 80632-1286 - 970-356-4400	EPA Registration Number/File Symbol 34704- 1033
Active Ingredient(s) and/or representative test compound(s) Glyphosate, Indolebutyric Acid & Kinetin	Date June 11, 2009
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial food crop, Terrestrial non food crop, Greenhouse non food crop, forestry	Product Name SWAGGER

**NOTE:** If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

**SECTION I: METHOD OF DATA SUPPORT (Check one method only)**

<input type="checkbox"/> I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	<input checked="" type="checkbox"/> I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).
--	---

**SECTION II: GENERAL OFFER TO PAY**

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☐ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

**SECTION III: CERTIFICATION**

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study, and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature 	Date June 11, 2009	Typed or Printed Name and Title Scott Baker - Registration Manager
---------------	-----------------------	---



**401 M Street, S.W.**

WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

**Paperwork Reduction Act Notice:** The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

### DATA MATRIX

Date June 11, 2009

EPA Reg No./File Symbol 34704-

Page 2 of 2

Applicant's/Registrant's Name &amp; Address

Loveland Products, Inc. PO Box 1286, Greeley, CO 80632

Product

SWAGGER

### Ingredient

[illegible]

Signature \_\_\_\_\_

113d

Name and Title

**Scott Baker - Registration Manager**

Date \_\_\_\_\_

June 11, 2009



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

401 M Street, S.W.  
WASHINGTON, D.C. 20460

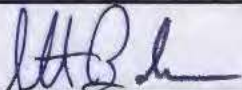
Form Approved OMB No. 2070-0060



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## DATA MATRIX



Date June 11, 2009		EPA Reg No./File Symbol 34704-		Page 1 of 2	
Applicant's/Registrant's Name & Address Loveland Products, Inc. PO Box 1286, Greeley, CO 80632		Product SWAGGER			
Ingredient					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6302	Color		Loveland Products, Inc.	OWN	
830.6303	Physical state		Loveland Products, Inc.	OWN	
830.6304	Odor		Loveland Products, Inc.	OWN	
830.6315	Flammability		Loveland Products, Inc.	OWN	
830.7000	pH		Loveland Products, Inc.	OWN	
830.7100	Viscosity		Loveland Products, Inc.	OWN	
830.7300	Density/relative density/bulk density		Loveland Products, Inc.	OWN	
830.1550	Product identity and composition		Loveland Products, Inc.	OWN	
830.1600	Description of materials used to produce the product		Loveland Products, Inc.	OWN	
830.1620	Description of production process		Loveland Products, Inc.	OWN	
830.1650	Description of formulation process		Loveland Products, Inc.	OWN	
830.1670	Discussion of formation of impurities		Loveland Products, Inc.	OWN	
830.1750	Certified limits		Loveland Products, Inc.	OWN	
830.1800	Enforcement analytical method		Loveland Products, Inc.	OWN	
Signature 			Name and Title Scott Baker - Registration Manager		Date June 11, 2009



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**401 M Street, S.W.**  
**WASHINGTON, D.C. 20460**

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**SUMMARY OF THE PHYSICAL/CHEMICAL PROPERTIES (PR Notice 98-1)**

<b>1. PRODUCT NAME:</b> SWAGGER		<b>2. Reg. No.</b> 34704-
<b>3. COMPANY NAME:</b> Loveland Products, Inc.		<b>4. SUBMISSION DATE:</b> June 11, 2009
<b>5. FIRST SUBMISSION</b> <input checked="" type="checkbox"/> <b>6. RESUBMISSION</b> <input type="checkbox"/>	<b>7. PESTICIDE TYPE:</b> Herbicide	<b>10. REGISTRATION</b> <input checked="" type="checkbox"/>
<b>8. FORMULATED MANUFACTURING-USE PRODUCT</b> <input type="checkbox"/> <b>or</b> <b>9. END-USE PRODUCT</b> <input checked="" type="checkbox"/>		<b>11. REREGISTRATION</b> <input type="checkbox"/>
<b>13. PRODUCT MANAGER OR CHEMICAL REVIEW MANAGER #/NAME (IF KNOWN):</b>		<b>12. REREG CASE #</b>
<b>14. GUIDELINE REFERENCE NO.(GRN)/TITLE</b>	<b>15. VALUE or QUALITATIVE DESCRIPTION/METHOD(s) USED WHERE APPLICABLE AND REFERENCES</b>	<b>16. MRID or REPORT NO.</b>

**Group B, Series 830-Physical and Chemical Properties (40 CFR 158.190)**

-6302	Color	Amber	26105
-6303	Physical State	liquid	26105
-6304	Odor	Amine like	26105
-6314	Oxidation/Reduction: Chemical Incompatibility	Not Applicable	
-6315	Flammability/Flame Extension	>100°C	26105
-6316	Explosibility	Not Applicable	
-6317	Storage Stability	Study in progress	
-6319	Miscibility	Not Applicable	
-6320	Corrosion Characteristics	Study in progress	
-6321	Dielectric Breakdown Voltage	Not Applicable	
-7000	pH	4.30 - 1% w/v solution	26105
-7100	Viscosity	51.365 cSt @ 20°C	26105
-7300	Density/Relative Density/ Bulk Density	1.173 g/ml	26105



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
401 M Street, S.W.  
WASHINGTON, D.C. 20460

**Paperwork Reduction Act Notice:** The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the completed form to this address.

**SELF-CERTIFICATION STATEMENT FOR THE  
PHYSICAL/CHEMICAL PROPERTIES (PR NOTICE 98-1)**

Product Name: SWAGGER

Reg. No./File Symbol No. 34704-  
(if known) or Company No.

**SELF-CERTIFICATION STATEMENT:**

I certify that the reported information on the "Summary Form" represents a true and accurate record of the test results of studies generated or owned by (Company Name): Lovleand Products, Inc.  
and that the values of the properties reported are reliable.

I further certify that such data was generated in substantial conformity with OPPTS Test Guidelines Series 830 Product Properties, applicable to my product, and in effect at the time of submission.

As a condition of registration, EPA may, by order, (1) withdraw a pending registration, (2) suspend the registration of this product without opportunity for hearing, or (3) assess civil penalties provided for in section 14 of FIFRA for violations of section 12(a)(2)(N) of FIFRA without opportunity for hearing, if I have not submitted to EPA within thirty (30) days of receipt of a request by the Agency, or within a specified time agreed to by the Agency, test results of studies summarized in the "Summary Form."

As a condition of registration, EPA may, by order, (1) withdraw a pending registration, (2) suspend the registration of this product without opportunity for hearing, or (3) assess civil penalties provided for in section 14 of FIFRA for violations of sections 12(a)(2)(N), 12(a)(2)(Q), or 12(a)(2)(R) of FIFRA without opportunity for hearing, if I fail to provide to EPA within thirty (30) days of receipt of a notification of error, or within a specified time agreed to by the Agency, information that EPA determines is required to correct the error.

Type Applicant's Name:

Scot Baker

Title:

Registration Manager

Telephone No.

970-534-3403

Applicant's Signature:

Date:

June 9, 2009

EPA Form 8570-37 (07/JAN/1998)

Attach-2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

June 23, 2009

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

LOVELAND PRODUCTS, INC.  
PO Box 1286  
GREELEY, CO 80632-1286

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your submittal of 11-JUN-09. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

**Comments:**

CALL MADE REGARDING DEFICIENCIES ON 6/18/09.  
NO CONTACT MADE, EMAIL SENT. 6/18/09

CORRECTIONS DELIVERED - DATA NOW 86-5 COMPLIANT.

MRID 477765

\* N/A – Not Applicable

**Footnotes**

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses. If an unapproved inert is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are strongly encouraged to verify that all inert ingredients have been approved for the application's uses **even if a product is currently registered** by consulting the inert Web

site [link to <http://www.epa.gov/oppr001/inerts/lists.html>] and if the inert is not approved, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient**. Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at [inertsbranch@epa.gov](mailto:inertsbranch@epa.gov) and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the Chief of Microbial Pesticides Branch [Link to [http://www.epa.gov/opppdpd1/biopesticides/contacts\\_bppd.htm](http://www.epa.gov/opppdpd1/biopesticides/contacts_bppd.htm)].

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information [link to <http://www.epa.gov/oppr001/inerts/tips.pdf>] must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

### **Unapproved Inerts Identified on CSFs**

#### **All applications except conventional new products and PIPs**

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

#### Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R311, R312 or R313), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or
2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)
3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

#### PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or
2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.



RE: Regarding SWAGGER (34704-RNGG)

Baker, Scott to: Anthony Ashe

06/22/2009 05:31 PM

Here is the signed page, sorry for the oversight.

Thanks,

Scott Baker  
Registration Manager  
Loveland Products, Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286  
(14520 WCR 64, 80631)  
970-534-3403- Desk  
970-356-8926- Fax  
970-381-7403 - Cell

scott.baker@cpsagu.com

-----Original Message-----

From: Ashe.Anthony@epamail.epa.gov [mailto:Ashe.Anthony@epamail.epa.gov]

Sent: Thursday, June 18, 2009 11:48 AM

To: Baker, Scott

Subject: Regarding SWAGGER (34704-RNGG)

This message is notice of a deficiency found in the submitted data for the above referenced product. In the study submitted entitled " Primary Eye Irritation" (study #26109) the Good Laboratory Practices Statement on page 3 is missing signatures of the Submitter and Sponsor. A signed copy of this page needs to be submitted before the process can proceed. The corrected page can be sent to me via fax at 703-305-5060 or via email. Once the corrected page has been received the application will be immediately processed. If you have any questions, feel free to call or email. Thank you for your attention to this matter.

Anthony H. Ashe  
MacFadden Contractor  
(703)305-0073



Signed page.pdf



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

June 12, 2009

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

OPP Decision Number: D-415127  
EPA File Symbol or Registration Number: 34704-RNGG  
Product Name: SWAGGER  
EPA Receipt Date: 11-Jun-2009  
EPA Company Number: 34704  
Company Name: LOVELAND PRODUCTS, INC.

Scott Baker  
LOVELAND PRODUCTS, INC.  
ATTN: MARK R. TROSTLE  
PO Box 1286  
GREELEY, CO 80632-1286

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-86-5 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R310

NEW PRODUCT;NON-FAST TRACK (INCLUDES REVIEWS OF PRODUCT  
CHEMISTRY;ACUTE TOXICITY;PUBLIC HEALTH PEST EFFICACY);

No additional payment is due at this time.

If you have any questions, please contact the Pesticide Registration Service Fee  
Ombudsman at (703) 305-6249.

Sincerely,

  
Front End Processing Staff  
Information Technology & Resources Management Division

# PRIA 2 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

21 Day Screen Start Date: 6-11-09 <sup>3/23/09</sup>  
 Experts In-Processing Signature: B.2 Date 6/16/09 Fee Paid: Yes X  
 Division management contacted on issues No        Yes        Date       

EPA Reg. Number: <u>34704-RNCG</u>		EPA Receipt Date: <u>6-11-09</u>				
Items for Review				Yes	No	N/A*
1	<b>Application Form</b> (EPA Form 8570-1)(link to form) signed & complete including package type			X		
2	<b>Confidential Statement of Formula</b> all boxes completed, form signed, and dated (EPA Form 8570-4) (Link to form)			X		
	a) All inerts (link to <a href="http://www.epa.gov/opprd001/inerts/">http://www.epa.gov/opprd001/inerts/</a> ), including fragrances, approved for the proposed uses (see Footnote A)	yes	no			
		X				
3	<b>Certification with Respect to Citation of Data</b> (EPA Form 8570-34) (Link to form) completed and signed (N/A if 100% repack)			X		
	Certificate and data matrix consistent			X		
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes	no			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	<b>Formulator's Exemption Statement</b> (EPA Form 8570-27) (Link to form) completed and signed (N/A if source is unregistered or applicant owns the technical)			X		
	<b>Data Matrix</b> (EPA Form 8570-35) (Link to form) both internal and external copies (PR 98-5) (Link to PR 98-5) completed and signed (N/A if 100% repack)			X		
5	a) Selective Method (Fee category experts use)	yes	no			
		X				
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)					
6	<b>5 Copies of Label</b> (link to <a href="http://www.epa.gov/oppead1/labeling/lrm/">http://www.epa.gov/oppead1/labeling/lrm/</a> ) (Electronic labels on CD are encouraged and guidance is available)( link to <a href="http://www.epa.gov/pesticides/regulating/registering/submissions/index.htm#labels">http://www.epa.gov/pesticides/regulating/registering/submissions/index.htm#labels</a> )			X		

7	Is the data package consistent with PR Notice 86-5 (link to PRN 86-5)	<input checked="" type="checkbox"/>		
8	Notice of Filing (link to <a href="http://www.epa.gov/pesticides/regulating/tolerance_petitions.htm">http://www.epa.gov/pesticides/regulating/tolerance_petitions.htm</a> ) included with petitions (link to <a href="http://www.epa.gov/pesticides/regulating/tolerances.htm">http://www.epa.gov/pesticides/regulating/tolerances.htm</a> )			<input checked="" type="checkbox"/>
9	If applicable for conventional applications, reduced risk rationale (link to <a href="http://www.epa.gov/opprd001/workplan/reducedrisk.html">http://www.epa.gov/opprd001/workplan/reducedrisk.html</a> )			<input checked="" type="checkbox"/>
10	Required Data (link to <a href="http://www.epa.gov/pesticides/regulating/data_requirements.htm">http://www.epa.gov/pesticides/regulating/data_requirements.htm</a> ) and/or data waivers. See Footnote C.			<input checked="" type="checkbox"/>
	a) List study (or studies) not included with application			



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OCT 21 2009

OFFICE OF  
REVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

\*Product ingredient source information may be entitled to confidential treatment\*

Mr. Mark Trostl  
Loveland Products, Inc.  
P.O. Box 1286  
Greeley, Colorado 80632-1286

Dear Mr. Trostl:

SUBJECT: SWAGGER

EPA File Symbol 34704-RNGG  
Application and Letter Dated June 11, 2009.  
Request To Register a Proposed Pesticide Product  
Under the Federal Insecticide, Fungicide and  
Rodenticide Act, as Amended (FIFRA)  
Application and Letter Signed by Mr. Scott Baker

The subject application to register the subject proposed new pesticide product has been reviewed and found unacceptable under the Federal Insecticide, Fungicide and Rodenticide Act, as amended for the following reasons:

1. Required product chemistry data were not submitted in support of this application. These data are identified in the enclosed product chemistry review dated October 21, 2009.
2. The proposed labeling must be submitted in format as described in the "General Labeling Requirements" section of the EPA "Label Review Manual, 3<sup>rd</sup> Edition, August, 2003.
3. The use-sites listed in the proposed labeling do not appear on one or more of the [REDACTED] sources of the active ingredient claimed in the ingredient section. You must limit the claims such that they appear on each of the sources. Please submit a chart listing of the use-sites separately to allow a quick analysis of the use-sites claimed. Be aware that all food uses must have a

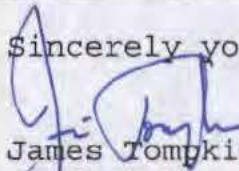
tolerance(s), or an EPA exemption, for residues (See section 180,364, for glyphosate, Code of Federal Regulations 40). All use-sites appearing on proposed labeling must also be listed and claimed on the product from which the product is derived. Please follow this requirement in all future applications.

4. The acute toxicological study data are yet under review. A copy of an edited front page of the labeling is enclosed for corrections to the ingredient statement of the proposed labeling. The claim "Licensed for Roundup Ready® alfalfa, corn, canola, Flax cotton, sugarbeets and soybeans." Must be deleted. Note: Further review of this page may identify unacceptable claims, pending acute toxicology review.

As this application is considered to be incomplete, section 152.105 allow you 75 days to correct the deficiencies. If you fail to correct the deficiencies within the 75 days from the date of this letter, the Agency will terminate any action and will treat the application as if it had been withdrawn by you. Any subsequent submission related to the same product must be submitted as a new application.

Further processing the subject application must await your response to the above reasons for not accepting this application as submitted. Please submit four (4) copies of revised labeling and highlight one copy in yellow to reflect all indicated and other changes to the labeling, except format changes (Font size etc.). If you wish to discuss the above review of this application call Eugene Wilson at 703-305-6103.

Sincerely yours,

  
James Tompkins  
Product Manager (25)  
Herbicide Branch  
Registration Division (7505P)

Enclosure (2)